MACKENZIE VALLEY ENVIRONMENTAL IMPACT AND REVIEW BOARD

PRAIRIE CREEK ALL SEASON ACCESS ROAD

CANADIAN ZINC CORPORATION

TECHNICAL SESSION

Mackenzie Valley Review Panel:

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Board Member	David Krutko
Board Member	Joe Handley
Board Member	Yvonne Doolittle
Board Member	Bertha Norwegian
Board Member	Sunny Munroe

Fort Simpson, NT

April 27, 2017

Day 2 of 3

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LIST OF UNDERTAKINGS

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1 --- Upon commencing at 8:48 a.m.

2

3 OPENING COMMENTS BY THE CHAIRPERSON:

4 THE CHAIRPERSON: Good morning. Good

5 morning, everyone. If we could take our seats and we

6 can start the day, please. We would like to reconvene

7 the meeting that started from yesterday.

8 This morning I have some opening

9 remarks. As we reopen the hearing today, the Review

10 Board would like to take a few moments to remind all

11 the parties about the legal framework which the Board

12 must work within when making their final decision.

13 This framework is important, and it

14 relates directly to the evidence being presented in

15 this hearing, as well as to the written final

16 arguments from parties following the public hearing.

17 It should be emphasized that in an

18 impact review -- that this Impact Review Board, our

19 views of the evidence provided and hearing submissions

20 shows that a number of parties have asked the Review

21 Board to recommend measures to the federal minister.

22 While we appreciate your submissions,

23 we remind all parties that the Board may only

24 recommend a measure where it finds that there is

25 likely to be a significant adverse impact on the

1 environment.

2 Many of the technical reports and

3 hearing submissions which recommend measures do not

4 specifically identify adverse impacts, the severity or

5 the significance of these impacts, or clearly explain

6 why the proposed measures are required to address

7 these impacts.

8 The Review Board reminds the parties of

9 this legal framework as the onus is on the party

10 recommending a measure to produce sufficient evidence

11 to support that recommendation. Thank you, and masi

12 cho.

13 On the agenda today, we have the review

14 of undertakings and commitments from yesterday. So

15 those undertakings are still being worked on, and just

16 for information, they will be dealt with today after

17 lunch.

18 This morning, we have Can Zinc

19 presenting the following topics. We have the Sundog

20 Creek ali -- realignment, we have the water quality

21 and quantity, we have the fish and aquatic habitat,

22 and we also have vegetation. So if I could ask

23 Canadian Zinc to start with their presentation,

24 please.

25

(BRIEF PAUSE)

THE CHAIRPERSON: Canadian Zinc, when we're doing the presentations, would you be so kind as to introduce the new people at your table for the presentations as well? Thank you.

MR. ALAN TAYLOR: Thank you, Madam Chair. It's Alan Taylor, Canadian Zinc.

Perhaps I can get those introductions out of the way now, while they're preparing.

(BRIEF PAUSE)

MR. ALAN TAYLOR: It -- it's Alan Taylor, with the Canadian Zinc, and my colleagues here, Dave Harpley, VP of environmental affairs. And Bill Rozeboom is a consultant with Tetra Tech EBA, and to his left is John Wilcockson with Hatfield Consultants. He's a fishery's expert.

And my colleagues in the back are -- oh, Ernie Kragt is with Allnorth Consulting. And Clayton Konisenta, our manager, Joseph Lanzon, our VP of government affairs, and Wilbert Antoine, our Northern manager.

THE CHAIRPERSON: There's no one on a

1 phone, Alan?

2 MR. ALAN TAYLOR: No, I don't believe

3 there is right now.

4

5 PRESENTATION BY CANADIAN ZINC CORPORATION:

6 MR. DAVID HARPLEY: It's Dave Harpley.

7 Thank you, Madam Chair.

8 So the presentation this morning,

9 again, some of the material has been presented

10 previously, so in the interest of time I'm going to

11 skip over some of it. It's there for reference, but

12 I'll focus on the things that we haven't covered to

13 this point.

14

15 (BRIEF PAUSE)

16

17 MR. DAVID HARPLEY: So we're going to

18 cover these four (4) topics this morning, Sundog Creek

19 water quality, fish and aquatic habitat, and

20 vegetation. And with respect to the Sundog Creek

21 alignment, there are four (4) items on the board,

22 there. The first one I think we've largely covered

23 before.

24 We'll spend a little bit more time on

25 the design of the proposed realignment, and discuss

1 habitat and aquatics issues related to it. And
2 probably have covered most of the construction and
3 sediment issues previously, but there may be a couple
4 of additional points.
5 So we've seen this slide before. This
6 was considering options, and the basis upon why we
7 prefer to actually move the creek as opposed to
8 construct bridges and have crossings of -- of the
9 creek.
10 This particular slide, which is number
11 5, we have not discussed before, and to me this is a
12 useful slide. It's -- it's a terrain surface derived
13 from the -- the LIDAR mapping that was completed. And
14 I think you can see that in the area of interest,
15 which is kind of in this location here, there's a --
16 there's a major tributary that comes in from the
17 north.
18 That's kind of the end of where the
19 diversion would be, and the start of the diversion is
20 up here. You can see that there are many smaller
21 channels in and around the other, more significant,
22 channels of the creek. So I think this gives you a
23 good indication of how dynamic the system is in terms
24 of periodically having an overflow, or maybe taking a
25 different course.

1 And it's kind of further reason as to
2 why we think bridges are a little difficult in this
3 environment, because you're always prone to the creek
4 deciding to do something different, and it becomes a
5 challenge to train the water under the bridge.
6 We've seen this slide before, but this
7 is basically a representation of the one hundred (100)
8 year flows and velocities in the system. The velocity
9 scale is on the right, here. So this is the existing
10 situation. And we've seen this before. Again,
11 existing channel, and the proposed channel we want to
12 divert -- an old channel we want to divert the flow
13 into and reactivate.
14 So here's the conceptual design of what
15 we're proposing. We're basically intending to have a
16 -- a barrier berm up here to ensure that the flow goes
17 in the direction we want it to rather than down the
18 existing channel. And then it would occupy -- or
19 reoccupy this old channel and it would discharge into
20 this northern tributary which then flows.
21 And the current confluence is here, so
22 the actual confluence would be a little further
23 upstream with the diversion and thereafter it would
24 continue as it does currently.
25 So this is a simulation of flow

1 velocities with the channel realigned, but not with
2 any modification of the channel. So currently you can
3 see that the flows are in the realigned channel and
4 that with a hundred-year flood there is some
5 divergence here into a couple of channels.
6 So the -- the intent here would be to
7 do some limited excavation and potentially some
8 widening of the existing channel to ensure that it has
9 the capacity to pass the one hundred-year flood, so we
10 don't get this secondary channel development
11 situation.
12 A little more information on the actual
13 design of the realignment. The intention is to mimic
14 the habitat in the realigned channel compared to what
15 is -- what there is existing. And the -- the 'B's on
16 this slide indicate locations where there are
17 significant boulders adjacent or in the channel and we
18 would intend to recreate that habitat, so it's
19 basically like for like.
20 I've covered this slide largely before.
21 Excuse me. One (1) additional thing I wanted to point
22 out using this slide is, you'll remember we discussed
23 the issue of sediment control in the realigned channel
24 and that we had proposed mitigation in the form of
25 using off-channel water to essentially wash down the

1 surface once the channel had been excavated as a means
2 of mobilizing fine sediment and managing that before
3 the act -- channel is actually active.
4 So I wanted to point out that the
5 location where we were proposed to acquire the water
6 for that operation would be kind of in this off-
7 channel vegetated area, which is an old part of the --
8 the floodplain. It would not be connected to any
9 active flow situation. And it's basically a location
10 where we could excavate a pit and access the water
11 table and -- and pump water from there.
12 So the habitat that we expect in the
13 existing and in the new channel, the key species of
14 presence is Arctic grayling. We do -- we have seen
15 Arctic grayling in small pools in the area. The
16 intention is to recreate what is currently migration
17 habitat.
18 There's also slimy sculpin that are
19 more of a resident species that would re-colonize the
20 existing channel -- or sorry, the new channel. And
21 there is a limited amount of benthos and periphyton in
22 the existing channel and it's limited because of lack
23 of nutrients, being a mountainous environment
24 situation.
25 So low productivity and we would

1 anticipate that that low productive aquatic situation
2 would recreate quite quickly in the realigned channel.
3 So the post-realignment situation is
4 indicated below in terms of Arctic grayling still
5 being able to migrate, slimy sculpin colonizing and
6 some development of benthic invertebrates and
7 periphyton.
8 We're seen this slide before, so I'll
9 skip this. We're now onto slide 14. This particular
10 slide, what we're showing is the size of the diversion
11 here in yellow versus the length of Sundog Creek prior
12 to its discharge downstream. And you can see that the
13 total creek length is quite large.
14 So in terms of impacts to things like
15 benthics, we believe the realignment is -- is
16 relatively small by comparison, so we wouldn't
17 anticipate any significant downstream impacts.
18 The other thing to bear in mind is the
19 realignment is kind of still in the mountainous
20 section, and then shortly thereafter it enters a more
21 lowland, woodland section where we would anticipate
22 nutrients and benthics and periphyton to be much
23 better developed.
24 Some of these details we've been over
25 before. The key thing is that we're actually doing

1 this construction in dry conditions not connected to
2 any active channel, and that work would be completed
3 before the following spring.
4 The sediment control we've discussed
5 previously. I mentioned the wash down and use of off-
6 channel groundwater. And the intent is basically to -
7 - to build this and conduct the mitigation in dry
8 conditions such that we don't get a significant
9 mobilization of sediment in the initial spring flows,
10 except for, if the spring flows are high and if
11 subsequent flows are high there will be sediment
12 mobilization, but this is a natural phenomena and
13 occurs throughout the system.
14 We've been over some of these before.
15 Again, in terms of -- this is water quality now on
16 slide 16. And we've proposed a number of mitigations
17 to protect water quality, development of plans, use of
18 appropriate materials that do not generate metals, and
19 controlling silt, and if we're having stockpiles,
20 having them in a location where they're not either
21 generating silt or discharging it to receiving water,
22 and using timing windows to conduct the activities to
23 -- to minimize impacts. Some of these would be
24 continued through operations with an emphasis on
25 monitoring and adaptive management.

1 Turning to fish and aquatic habitat.
2 We're going to briefly look at water courses because
3 I've shown you those slides previously. We'll cover a
4 few more aspects, such as preservation of passage,
5 littoral zones of -- of lakes, and a little bit of
6 time on habitat loss, alteration, and offset.
7 So these series of photographs were
8 intended for reference. They show the major water
9 cross crossings. We did look at some of them before.
10 This is Cas -- this is Casket Creek, which is a --
11 kind of an outwash fan crossing situation.
12 And then, going from west to east,
13 these are the other major crossings. This one is at
14 twe -- kilometre 20. This would actually be a large
15 culvert crossing, and it's a non-fish bearing stream.
16 Then 23 we've seen before and these
17 other ones down Sundog Creek. This is kilometre 39
18 just upstream of Cat Camp and is -- is just before we
19 -- the road leaves Sundog. There's a tributary that
20 comes in here. And we need to ensure the creek stays
21 in its channel. That's the intent of these berms
22 here, and so that the water actually passes under the
23 crossing structure.
24 And then again, we've seen these
25 before. This is Tetcela crossing the tributary, and

1 this is the main stem. And then in the east, slide
2 29, the Grainger River. And this is the main stem of
3 Grainger River. And you'll notice some training works
4 in here for flows and the Liard River crossing.
5 So one (1) of the concerns with
6 crossing structures, and particularly with culverts,
7 is we want to make sure that the culverts remain as
8 they were placed, and that they are straight, and --
9 and that they don't become -- no significant
10 settlement occurs such that they become an obstruction
11 to migration for fish.
12 For the most part, the culverts that
13 we'll be placing are in non-fish-bearing streams.
14 There's only, I think, a couple of culverts that would
15 be in potentially fish-bearing streams.
16 But nevertheless, they would all be
17 installed so that they would remain open for passage
18 of aquatics. And these would be inspected in a
19 regular basis, and if some repairs are needed, then
20 those would be implemented.
21 Moving on to lakes and littoral zones,
22 we have indicated that we may need to acquire water
23 for dust suppression in summertime. You can
24 appreciate the northern climate, that summertime and
25 dry conditions is not always terribly lengthy period.

1 But periodically, we -- we may get dust on -- on the
2 gravel road, and we'd want to suppress.
3 So we're looking to acquire water from
4 local lakes. We've actually identified these lakes
5 previously in the last EA for the winter road, where
6 at that time we were proposing to use them for winter
7 road construction.
8 So the lakes in question we've looked
9 at in terms of the kind of quantity of water we would
10 need in relation to the lake volume. And we've
11 assumed a limit of extraction based on each individual
12 lake. And these limits range from 1 to 5 percent, so
13 not a significant volume.
14 The -- the littoral zone loss, in other
15 words, the -- the loss of littoral zone by potential
16 dewatering of these lakes we expect would be of a
17 similar magnitude or considerably less.
18 You can imagine over a summer season,
19 we may be extracting water over -- at the period of
20 the summer period. But at the same time, these lakes
21 still have inflows, and then they normally also have
22 outflows. So we may be taking a small quantity of
23 water out, but there's also water flowing into the
24 lakes.
25 So it's our expectation that we're

1 probably not going to see any change in the littoral
2 zone, or any noticeable change in the littoral zone at
3 all -- loss of the zone, that is.
4 The other thing to bear in mind is that
5 from -- from the evidence that we have at this point,
6 we believe it's unlikely that these lakes are
7 accessible to migrating fish. Many of them are
8 headwater lakes and have downstream barriers to
9 migration. It's possible that they have resident
10 species. We don't know for sure, but it -- it's at
11 least possible.
12 There's one (1) lake that we do know
13 supports fish, and that's what we call Gap Lake. This
14 is the -- the Grainger Gap. However, when we were in
15 the area two (2) years ago, we observed beaver dams
16 being constructed downstream of the lake, and that
17 levels -- water levels in the area had -- were
18 artificially rising as a result.
19 So it's our expectation that that lake
20 has subsequently been inundated, because of those
21 beaver dams. So what I'm saying is, is that the
22 potential for impacts from our water extraction, in --
23 in our estimation, is very low.
24 And in addition to the likelihood that
25 there wouldn't be any significant in -- in-season loss

1 of littoral zone, we're pretty sure there'd be no
2 cumulative loss of littoral zone between years,
3 because as you can imagine with winter snowfall,
4 spring runoff, snow melt, almost certainly, these
5 lakes are going to recharge and be flowing again back
6 to their normal lake elevation.
7 So lastly, coming to habitat loss,
8 alteration, and offset. For the most part, we will
9 not be causing habitat loss due to water course
10 crossings. Nearly all of the major crossings we are
11 proposing are clear spans, and the abutments are
12 outside of the ordinary high water mark. So no
13 habitat loss in that respect.
14 The only -- only exception is the
15 Sundog realignment that we've discussed earlier.
16 There will be alteration of some of the crossings. As
17 I mentioned, some of the culverts are potentially
18 going to be installed in fish-bearing streams. So we
19 are altering that habitat in the sense that we're
20 placing the hulvert -- the culvert, which would be
21 partially buried so that we can recreate a natural
22 habitat in the bottom of it. So we're altering it,
23 but we're not basically removing it.
24 And then we will need landing ramps on
25 either side of the Laird River for the crossing, so

1 those ramps are also altering habitat. In this case,
2 we're -- we're providing more of a gravel surface,
3 whereas currently it's a -- primarily a silt surface.
4 So how we propose to offset these --
5 well, the loss and these alterations is, as I
6 mentioned earlier in the week, the construction of an
7 over-wintering pool to provide much needed over-
8 wintering habitat in Sundog Creek.
9 If I may, I'm going to switch to some
10 photographs that we loaded on the laptop this morning.
11 There was a question yesterday regarding the proximity
12 of the road to Sundog Creek in the upper section, and
13 I thought it would be useful to actually show you
14 rather than rely on what I said yesterday.
15
16 (BRIEF PAUSE)
17
18 MR. DAVID HARPLEY: So we're going to
19 start at the downstream end, and then move upstream.
20 So here we are at kilometre -- approximately kilometre
21 29, and here you see the main stem of Sundog Creek,
22 and this is a tributary.
23 So the road actually crosses the
24 tributary with a clear span bridge, and you can see
25 that the alignment's been superimposed on the photo --

1 photograph here. And in this particular location, the
2 -- the road is somewhat proximal to the main stem,
3 particularly in this location, a little bit up slope
4 from the creek.
5 And the same again here, but then once
6 it climbs this bench at around about twenty (20) --
7 kilometre 28 here, it starts to move away a little
8 further from the creek.
9
10 (BRIEF PAUSE)
11
12 MR. DAVID HARPLEY: And then moving
13 upstream, there's another tributary crossing here at
14 around about twenty-seven (27), but you can see that
15 the -- well, not a great photograph, but you can see
16 that the road is -- is kind of up on a bench, and
17 there's a -- there's a -- a bit of a slope, and then
18 more of a steep drop-off to the actual creek down
19 here. So it's -- there's a fair amount of distance
20 between the road alignment and the creek in this
21 location.
22 And then continuing on, a very similar
23 situation. It does get a little closer to the slope
24 in this particular spot, but you can see the bench
25 here that I'm referring to.

1 Another crossing, and this would need
2 to be a rock cut to climb onto a different elevation
3 bench up here, so a little closer in this particular
4 location, but -- but after -- this would probably be a
5 cut through where there's a rock wall on both sides.
6 And then once we're up on the bench here we're a
7 little more distant from the creek again.
8 And then lastly, we stay somewhat back
9 from the creek until we tie into the original winter
10 road here, just before that canyon crossing at
11 kilometre 23.
12 So back to the presentation on slide
13 34. The last subject is vegetation. We've conducted
14 characterization of vegetation assemblages. They were
15 classified using three (3) different ecotype
16 classification systems. So we feel reasonably
17 confident that we've covered the -- the dominant
18 ecotypes and classified them along the route suitably.
19 We've conducted three (3) field surveys
20 to date, primarily focussed on observing and detecting
21 SARA or GNWT listed rare plant species. And to this
22 point none of any significance have been found.
23 In addition, well, I'll leave. I'll
24 skip that point. It's -- it's there to be read. I
25 don't think I need to repeat it. Regarding rare

1 plants, our consultant did suggest even though we've
2 conducted three (3) surveys to this point, it -- it's
3 possible that there are some early season rare plants
4 that would -- could only be observed when they flower
5 in the spring, so they recommended a precautionary
6 early survey just to confirm that none are present.
7 And -- and if some are found then
8 mitigation can be applied to that point, so we have
9 committed to do that survey. So the net result is we
10 feel that the potential for significant effects to
11 vegetation is low. Thank you.
12
13 QUESTION PERIOD:
14 THE CHAIRPERSON: Okay. Thank you for
15 your presentation. Questions to the presentation,
16 Dehcho First Nations?
17 MS. CARRIE BRENEMAN: Carrie Breneman,
18 Dehcho First Nations. Thanks for your presentation,
19 David. For the Sundog Creek realignment you mention
20 that you're going to recreate habitat using boulders.
21 How will that process work? Like
22 you're going to move boulders from other areas that
23 are similar to what's present in the current Sundog
24 Creek realignment and move them there? Is that
25 correct?

1 (BRIEF PAUSE)

2

3 MR. DAVID HARPLEY: It's Dave Harpley.
4 I think the approach will need to be flexible
5 depending on what we encounter during the excavation
6 of the existing -- existing -- the old channel that
7 we're reactivating. We think that it's likely that we
8 may uncover boulders in the excavation.
9 And if we do then those would be the
10 ones that we'd utilize. If we don't encounter those
11 boulders, we feel that it's appropriate to use the
12 boulders that are presently in the existing channel,
13 because once we've redirected the flow those boulders
14 will cease to function in the way that they currently
15 do.
16 In other words, that's not really the
17 same habitat anymore. We can discuss this with
18 parties to get their views on that matter. The other
19 alternative is there's quite a lot of material in the
20 adjacent area and -- and flood plain, sort of material
21 that's come down the slopes from above that's
22 currently not proximal to the channels. That would be
23 available for borrow essentially and -- and use for
24 the habitat that we're proposing.
25 MS. CARRIE BRENEMAN: My understanding

1 from your presentation is that you're going to be
2 excavating in the channel, and then using off-channel
3 water to mobilize fine sediment. Is that correct?
4 MR. DAVID HARPLEY: Dave Harpley.
5 That's correct.
6 MS. CARRIE BRENEMAN: My question is --
7 THE CHAIRPERSON: Please state your
8 name again --
9 MS. CARRIE BRENEMAN: Oh.
10 THE CHAIRPERSON: -- again for the
11 record. Thank you.
12 MS. CARRIE BRENEMAN: Carrie Breneman,
13 Dehcho First Nations.
14 When you're excavating the channel and
15 kind of creating these boulders, and then using off-
16 channel water to mobilize fine sediment how do you
17 understand when you've kind of mobilized enough fine
18 sediment? Like, are you going to have monitoring
19 present there to understand that most of this fine
20 sediment's been washed down?
21 MR. DAVID HARPLEY: Dave Harpley.
22 Yes, we will be monitoring it and observing the
23 turbidity of the water and basically decide our
24 approach to -- to manage the fines depending on the
25 situation that occurs.

1 You can understand that during the
2 excavation and the time of the excavation, with it
3 being late in the season, going into winter, it's -- I
4 mean, we expect to be working in dry conditions. We
5 would also anticipate that we may not encounter water
6 at all in the excavation itself because what happens
7 in this system, we believe, is that, as precipitation
8 tails off through the summer into the fall, the flows
9 subside. And then the groundwater table reduces in
10 elevation.
11 And -- and if we -- even if we did
12 excavate and -- and encounter water, that -- that's
13 basically going to be groundwater and is not going to
14 be flowing surface water. So the water we will
15 introduce in the -- in the washing exercise, it's
16 possible that it will simply immediately drain away
17 because the material is quite porous. However, if it
18 -- if it starts to flow, we're intending to basically
19 allow it to flow to some form of created sump where
20 the water can pull and the -- the sediment can settle.
21 And then we'll manage the -- we propose
22 to manage the sediment at that stage depending on how
23 much it is. If it -- if it's minimal, we may simply
24 place coarser material after the settling has occurred
25 and the -- and the pond is drained so that that fine

1 material doesn't subsequently get mobilized when the
2 channel is reactivated.
3 And, if necessary, if -- if the -- the
4 drainage is not occurring and we still have elevated
5 sediment, we may choose to -- to pump that water again
6 to an off-channel area to allow the -- the water to
7 filter out naturally.
8 MS. CARRIE BRENEMAN: Carrie Breneman,
9 Dehcho First Nations.
10 You -- you mentioned in that that
11 you're going to be monitoring for sediment. Are you
12 going to be using some sort of kind of evidence-based
13 approach of what you would be expecting in TSS for the
14 old channel, and then kind of have an understanding of
15 -- you're going to be mobilizing sediment. At a
16 certain point, you feel like most of that sediment's
17 been washed down, based on TSS, or is it just
18 observation?
19 MR. DAVID HARPLEY: Dave Harpley. I
20 think it'll be a combination of observation and
21 monitoring, so we can basically document what we've
22 done and the evidence. I don't see it being related
23 to the existing channel because this is a construction
24 situation before the channel is activated. So, yes,
25 it can be documented.

1 (BRIEF PAUSE)

2

3 MS. CARRIE BRENEMAN: Carrie Breneman,

4 Dehcho First Nations.

5 From your project, you were saying this

6 --the -- for the Sundog Creek realignment, there's

7 grayling that live in that environment, slimy sculpin,

8 and benthic invertebrates.

9 What kind of monitoring are you

10 proposing to doing post-offsetting? So when you

11 redivert this channel, how can we be assured that this

12 method that's you're -- you're proposing is going to

13 work?

14 MR. DAVID HARPLEY: Dave Harpley. The

15 key consideration, we believe, is that the realigned

16 channel maintains flow capacity in terms of passing

17 high-volume water, like a flood situation, and also

18 that we have similar velocities to what currently

19 exists so that grayling are still able to migrate as

20 well as they do currently.

21 So the emphasis is on monitoring of

22 capacity and velocity situation to ensure that we're

23 providing like for like.

24

25 (BRIEF PAUSE)

1 MS. CARRIE BRENEMAN: Carrie Breneman,
2 Dehcho First Nations. So from what you're saying,
3 you're going to -- after this offsetting is completed,
4 you're going to be monitoring for flow capacity and
5 similar velocity.
6 But my understanding of the purpose of
7 this project is to kind of offset fish -- or offset
8 habitat for -- or offset for fish and fish habitat,
9 and that if you're only monitoring for water, it won't
10 really tell you how productive this has been for
11 recreating fish habitat.
12 So I don't really understand how you
13 can get to that part of the -- the process by
14 monitoring only flow capacity and velocity.
15
16 (BRIEF PAUSE)
17
18 MR. DAVID HARPLEY: It's Dave Harpley.
19 So as far as the realignment effectiveness is
20 concerned, the key item is capacity and velocity. And
21 provided those are comparable, there's no reason to
22 expect the ability of fish to migrate would be any
23 different.
24 That's separate from the offset
25 situation. The offset situation is related to

1 basically what it says: offsetting the loss of habitat
2 from moving the channel.
3 And that offset is a winter-related
4 habitat situation where we're intending to create a
5 deep pool so that grayling primarily are able to
6 survive the winter, whereas currently, we believe
7 they're not able to survive. If they don't migrate
8 back down the system, they basically get trapped in
9 small pools, which eventually dry out and there's
10 mortality.
11
12 (BRIEF PAUSE)
13
14 MS. DAHTI TSETSO: Dhati Tsetso,
15 Dehcho First Nations. We're just having a discussion
16 among ourself.
17 We're trying to understand -- we've
18 heard Canadian Zinc explain how they'll divert the
19 Sundog Creek, and all the explanations and rationales
20 behind how that'll work: the moving of the boulders,
21 the deepening of the channels, the ensuring of water
22 velocity and water flow capacity.
23 From the perspective of Dehcho First
24 Nations, we're just wanting to ensure that there's a
25 system in place to make sure that what is -- what

1 you're doing is -- is successful. And we're still
2 unclear how -- how that'll be ensured without some
3 sort of fish monitoring situation or plan.
4 Could -- could you speak to that one
5 (1) more time, please?
6
7 (BRIEF PAUSE)
8
9 MR. JOHN WILCOCKSON: This is John
10 Wilcockson, Hatfield Consultants, Madam Chairman.
11 We -- we have considered monitoring
12 fish -- fish passage at the time of -- of migration in
13 the spring when grayling are most likely to pass
14 through the area. The difficulty is, is that period
15 of migration is going to be very short, and methods
16 that we often use as biologists to -- to monitor the
17 passage of fish often will require the installation of
18 equipment.
19 And to do that you need some solid
20 surfaces where you're not going to lose your
21 equipment, because it's a scenario where you can't
22 necessarily have a person there 24/7 for a long period
23 of time, or for -- for, you know, a period of -- of
24 maybe a week or two (2) weeks to a month.
25 And during spring when -- when flows

are higher, there is -- we know that there is going to be quite a bit of bed movement through there. So in all likelihood, if we -- we even tried to monitor fish passage through this -- this area, we're going to lose our equipment, and we'd probably end up with no data.

The -- the key factor for -- for the grayling to get through is -- is velocity. We know that the new channel that we're going to be using is going to be very similar to the old channel, and -- and what is going to be crucial for those fish in order to pass through that area is that they have similar types of flows that they currently have in the old channel.

And that -- that's why our focus has been on the flow regimes that we are going to have in the future, because that's -- that's what the fish will need.

MS. CARRIE BRENEMAN: Carrie Breneman, Dehcho First Nations.

John, have you been involved in these types of fish-offsetting projects in the past?

MR. JOHN WILCOCKSON: Yes. Oh, sorry. It's John Wilcockson. The answer is yes.

MS. CARRIE BRENEMAN: Carrie Breneman, Dehcho First Nations.

1 What's been the general success rate
2 for the -- for other projects when you're offsetting
3 fish and fish habitat in terms of fish -- like, fish
4 population numbers?
5
6 (BRIEF PAUSE)
7
8 MR. JOHN WILCOCKSON: John Wilcockson,
9 Hatfield.
10 My -- my experience is limited. It --
11 we've been -- I've been focussing mostly on -- on this
12 -- this particular setting in Prairie Creek, and I
13 have been relying on the expertise of -- of those
14 around me who have -- at Hatfield who have extensive
15 fish, and fish habitat, and reclamation studies.
16 And their experience has been that
17 there has been quite good success in -- in offsetting,
18 and I guess that's my answer.
19 MR. DAVID HARPLEY: Madam Chair...?
20 THE CHAIRPERSON: Mr. Harpley...?
21 MR. DAVID HARPLEY: It's Dave Harpley.
22 Just to add to John's description, John
23 was involved in an offsetting situation in Prairie
24 Creek some years ago. In 2006 and 2007, I believe,
25 there were significant floods on Prairie Creek that

1 the area hadn't see at -- at least since the
2 construction of the mine back in the early '80s.
3 When Cadillac built the -- the winter
4 road, down Funeral Creek and Prairie Creek they didn't
5 armour the road. So when those flood events occurred
6 there were washouts to the road. And when we came to
7 reconstruct the road bed it was determined by DFO that
8 we were causing habitat loss and therefore had to
9 offset that loss.
10 So the offset solution was to construct
11 over wintering ponds in an area just downstream of
12 Casket Creek where that outwash fan is, because the
13 outwash fan prova -- provides flow and there is kind
14 of surface flow and also groundwater in the alluvial -
15 - the old alluvial area and there is a -- a side
16 channel associated with that area, which is also fish
17 bearing, actually.
18 So we excavated a couple of ponds in
19 that area and John was involved with his colleagues at
20 Hatfield Consultants in the design of those works.
21 The -- the physical construction of those works was
22 successful. They were tied into the small channel
23 there.
24 Just we have not been able to be there
25 sufficiently over winter and conduct the studies to

1 verify that they actually are being used as
2 overwintering habitat. But overwintering is a -- is a
3 problem in all of these mountain streams in the area,
4 so we're hopeful that those ponds would be beneficial
5 and we have no reason to believe that the pond we're
6 proposing in Sundog Creek would be any different.
7 MS. DAHTI TSETSO: Dahti Tsetso,
8 Dehcho First Nations.
9 I thought I heard a comment earlier
10 from the Canadian Zinc team that in order to do some
11 monitoring it would require equipment that could
12 easily be lost, because it could not be properly
13 anchored. Alternatively, it would require somebody
14 physically being at the realignment site for two (2)
15 weeks -- two (2) to four (4) weeks continuously.
16 Could you -- could you just confirm
17 that -- that I heard that properly?
18 MR. DAVID HARPLEY: It's Dave Harpley.
19 I believe that's correct. What -- that's what John
20 said.
21 I -- I guess I would also add that it's
22 my understanding that when grayling migrate it's not
23 always easy to determine when they're actually
24 migrating and sometimes those migrations can be rather
25 rapid and quite brief.

1 So it's kind of a case of -- it a bit
2 of a like a lottery. You've got a really -- unless
3 you're there all the time, you can't really ensure
4 that you're going to be there at the right time to see
5 the migration.
6 So there are, you know, practical
7 considerations in -- in the monitoring situation.
8 MS. DAHTI TSETSO: Dahti Tsetso,
9 Dehcho First Nations.
10 I -- I want to raise the possibility of
11 potentially Canadian Zinc working with the community
12 of maybe Nahanni Butte, or also Nahanni Butte and
13 LKFN. There is a regional water monitoring program
14 known as Dehcho AAROM, where we have local people
15 trained to do water monitoring and there could be some
16 sort of possibility or discussions on how we could get
17 some local monitors involved maybe in the first year
18 after construction just to see if that could be -- if
19 the divergent is successful.
20 So having local monitors sort of
21 stationed by the creek to -- to do that surveillance
22 of the grayling run?
23 MR. DAVID HARPLEY: It's Dave Harpley.
24 In fact, we've already made the commitment to Nahanni
25 Butte that we will employee their members as

1 environmental monitors on the road. So that situation
2 is already planned for.
3 Certainly those monitors can monitor
4 the section of the realignment we're talking about.
5 And it may well be that they can anecdotally observe
6 graying migrating through the system upstream, but I
7 don't think there's any guarantee of that.
8 Sometimes fish can be observed,
9 sometimes it's more difficult, but -- because they do
10 tend to find refuge, and hang out, and they're not
11 always easy to see. So there's a -- I mean, in
12 principle, I've got no problem with this suggestion,
13 but just recognizing there's a difference between
14 professional biologists with equipment and an
15 electroshocker versus somebody who's merely observing.
16
17 (BRIEF PAUSE)
18
19 MS. CARRIE BRENEMAN: Carrie Breneman,
20 Dehcho First Nations. Two (2) -- two (2) points.
21 I mean, if -- if there was work done on
22 the past to have an understanding of what grayling
23 look like in Sundog Creek and how they migrate it
24 speaks to the fact that -- that monitoring of grayling
25 is possible. If you did it for baseline, you can do

1 it later on for monitoring after this Sundog Creek
2 offsetting project is done.
3 And 2), Dahti earlier spoke about the
4 AAROM program, and they have -- they have local
5 members who have certification in cabin monitoring and
6 water quality monitoring. And I think the possibility
7 of having people who are ticketed for electro fishing
8 or -- or some of the certifications that professional
9 biologists do is an option. We've done it for other
10 types of projects in the past.
11 MR. DAVID HARPLEY: It's Dave Harpley.
12 A couple of points there.
13 The -- the first point with respect to
14 baseline, we have conducted work in the area, and just
15 to understand the hydraulics of the system and -- and
16 the habitat in the system, and in doing that work,
17 we've encountered grayling present in -- in pair --
18 pools of various size. It's a little bit different
19 from actually monitoring a migration situation.
20 So we know they're there. But as far
21 as timing and numbers, that's a bit more complicated.
22 And related to that and also onto your second point,
23 again, I think we're getting away from the purpose of
24 this realignment, which is to provide comparable
25 habitat for migration.

1 And again, we think the appropriate
2 focus needs to be on the capacity and the velocities
3 in the system, not whether they're actually being used
4 for migration. It's kind of like the situation of you
5 can built it, but you cannot -- can't always ensure
6 that they'll come.
7
8 (BRIEF PAUSE)
9
10 MS. CARRIE BRENEMAN: Carrie Breneman,
11 Dehcho First Nations.
12 I understand your point about the
13 importance of measuring flow capacity and making sure
14 that the volumes are similar and that the -- the
15 stream is similar. But for other resource development
16 projects, we kind of understand that sometimes
17 offsetting or mitigations that are proposed don't
18 necessarily work.
19 And in this case, your -- the intent to
20 the project is to -- to provide migration habitat for
21 grayling. And I don't understand how you can get to
22 seeing if that works without monitoring grayling?
23
24 (BRIEF PAUSE)
25

1 MR. DAVID HARPLEY: It's Dave Harpley.
2 We know that grayling migrate in the system. What we
3 don't know is if they actually reside in the system
4 longer term, in other words, actually are able to
5 survive the winter.
6 So, theoretically, you could do
7 monitoring upstream and find that grayling are there,
8 and then conclude that they therefore were able to
9 migrate. However, if they were already resident in
10 the system, then you'd be making the -- an incorrect
11 conclusion.
12 So again, we come back to the
13 fundamental approach, which is the realignment needs
14 to provide comparable habitat. All we're doing here
15 is changing from one (1) existing channel to an old
16 channel that used to be the main channel.
17 So we're doing something that the
18 system naturally has done in the past, and provided
19 the capacity and flows are the same, there should be
20 no difference and therefore no impact on the resident
21 species.
22
23 (BRIEF PAUSE)
24
25 MS. CARRIE BRENEMAN: You mentioned in

1 your presentation that you will be --
2 THE CHAIRPERSON: Please state --
3 state your name again, please, for --
4 MS. CARRIE BRENEMAN: Carrie Breneman,
5 Dehcho First Nations. David, you mentioned in your
6 presentation that you'll be withdrawing water from Gap
7 Lake, which you also mentioned support fish.
8 What -- what type of fish are present
9 there?
10 MR. DAVID HARPLEY: Dave Harpley. I
11 know for sure that there's grayling and what's locally
12 called jackfish, which we call northern pike in that
13 system. There may be other species, but those two (2)
14 for sure.
15 MS. CARRIE BRENEMAN: And I think in
16 your presentation, you said something along the lines
17 that you'll be withdrawing maybe up to 5 or 10 percent
18 water out of -- out -- sorry, what were the numbers?
19 MR. DAVID HARPLEY: Dave Harpley. The
20 range is 1 to 5 percent, and it's dependent on the
21 specific lake.
22 MS. CARRIE BRENEMAN: So for Gap Lake,
23 what -- what's the specific number for that lake?
24 MR. DAVID HARPLEY: Dave Harpley. I
25 don't have that in my memory bank currently, but it is

on the record.

MS. CARRIE BRENEMAN: I'm just wondering, for this particular lake, what -- what types of monitoring are -- are you going to -- or are you going to have any types of monitoring placed to understand what -- you know, if you withdraw from Gap Lake, there's fish present in that lake -- of what -- what lake levels look like over time?

MR. DAVID HARPLEY: It's Dave Harpley. We will -- we will be monitoring the quantity of water for extracting, because that's a requirement of the Class B -- or would be a requirement of the Class B water licence, because we're not -- we're not allowed to exceed a daily amount. And obviously, we wouldn't -- we wouldn't allow ourselves to exceed the limit that we've self-imposed.

So that's the monitoring we would propose to use, and understanding that we would not want to exceed the limit that we've set, which is relatively small compared to lake volume.

(BRIEF PAUSE)

MS. CARRIE BRENEMAN: Carrie Breneman, Dehcho First Nations. So you'll be measuring the

1 amount of water you're extracting, but not necessarily
2 measuring lake volumes or -- or have any sort of
3 yardstick or something that you're looking at in terms
4 of what -- what that lake looks like over time.
5 Is that correct?
6 MR. DAVID HARPLEY: Dave Harpley.
7 That's correct. I personally don't see the point of a
8 water gauge I think is what you're referring to,
9 because as I explained earlier, the amounts we're
10 proposing are pretty small. And also, these lakes are
11 continually receiving inflow, so I expect that the
12 inflows will be exceeding our extraction on an ongoing
13 basis.
14 MS. CARRIE BRENEMAN: Carrie Breneman,
15 Dehcho First Nations. But -- but what if they're not?
16 Like, I mean, if you're taking 5
17 percent of the lake every year for twenty (20) years,
18 and you're in a situation where maybe the inflow isn't
19 as much as you're predicting, shouldn't there maybe be
20 some residual monitoring to make sure that that's --
21 that assumption's correct?
22 MR. DAVID HARPLEY: It's Dave Harpley.
23 I don't think you want to suggest that these lakes
24 don't recharge completely on an annual basis because I
25 think any water resources person would agree that it's

1 extremely unlikely.

2 THE CHAIRPERSON: Could I just ask

3 Dehcho First Nations how many more questions you have

4 so we would allow other parties to ask questions in

5 keeping with fairness of the hearing?

6

7 ` (BRIEF PAUSE)

8

9 MS. DAHTI TSETSO: Sorry. Yeah, we'll

10 limit our questions to -- to this last one (1) and we

11 can stand back down, and come back afterwards. This

12 is Dahti Tsetso, Dehcho First Nations.

13 I just wanted to go back to the

14 diversion of the water at Sundog Creek. In the

15 presentation, you spoke about ensuring it was done

16 during the low water levels during the fall, and the

17 work would be completed so that it would not impact

18 spring migration for grayling the following season.

19 Could Canadian Zinc just clarify how

20 they can ensure that the work required will be done

21 within the -- the timeline of the fall months, just to

22 -- and, like, what -- how did you come up that you can

23 get that work done so that you're not -- you're

24 ensuring that you're not impacting that spring

25 migration in the spring?

1 MR. DAVID HARPLEY: It's Dave Harpley.
2 In a construction standpoint, we don't
3 think it's actually a significant amount of work.
4 Yes, there is some attention required for details such
5 as habitat, but the actual works themselves shouldn't
6 take too many weeks to complete.
7 And we're pretty confident, given that
8 we've seen dry conditions any time from August,
9 really, onwards in this area, there's -- there's many
10 months to complete this work before springtime.
11 MS. CARRIE BRENEMAN: Carrie Breneman,
12 Dehcho First Nations.
13 We may have more questions. We're
14 going to stand down for now, and we'll -- we'll
15 address them later, if necessary.
16 THE CHAIRPERSON: Okay. Thank you.
17 Questions to the presentation, Environment and Climate
18 Change Canada?
19 MR. BRADLEY SUMMERFIELD: Bradley
20 Summerfield, with Environment and Climate Change
21 Canada.
22 We have no questions.
23 THE CHAIRPERSON: Questions, Fisheries
24 and Oceans Canada?
25 MS. VERONIQUE D'AMOURS GAUTHIER:

1 Veronique D'Amours Gauthier, Fisheries and Oceans
2 Canada.
3 We don't have any question. Thank you,
4 Madam Chair.
5 THE CHAIRPERSON: Questions,
6 Government of the Northwest Territories?
7 MS. MONICA WENDT: Monica Wendt,
8 Government of Northwest Territories.
9 We have no questions.
10 THE CHAIRPERSON: Questions,
11 Indigenous and Northern Affairs Canada?
12 MR. MIKE ROESCH: Mike Roesch, for
13 INAC.
14 We have no questions. Thank you.
15 THE CHAIRPERSON: Questions, Liidlii
16 Kue First Nation?
17 MR. DEAN HOLMAN: Tha -- thank you,
18 Madam Chair. Good morning to everybody. Go Oilers.
19 Excuse me.
20 Madam Chair, water is a -- is a sacred
21 -- it's -- it's a sacred resource to the Dene people,
22 as are the natural ecosystems. We have extensive
23 historical use of the Nahanni area shown through our
24 indigenous knowledge studies related to the Dehcho
25 Land Use Plan and the Nahanni National Park expansion

1 agreement processes, including living knowledge and
2 use of areas, and features, and resources within the
3 project area.
4 Our people have the right to hunt,
5 fish, trap, and gather resources, and the right to
6 protect those resources and the lands upon which those
7 resources cross, including the project area. Our land
8 use and occupancy is not limited to traditional land
9 use and occupancy, but also the ability to continue
10 our cultural activities, including ceremony,
11 spirituality, and cultural continuity.
12 Liidlii Kue First Nation has developed
13 policies and processes prior to and towards our Dehcho
14 resource management authority, which is the arm of
15 public government that we are working towards,
16 including decision making through Chief and council,
17 committees such as Denendeh Resource Committee, and
18 our interim Liidlii Kue First Nation traditional
19 knowledge policies.
20 Through Dehcho AAROM's community-based
21 monitoring and fish data, of which we are participants
22 in, we became aware of a grayling wipeout in the
23 1980s. And since that time the population has not
24 returned to its once healthy population and
25 distribution.

1 It's for these reasons we consider the
2 Sundog Creek realignment to cause serious harm to fish
3 and fish habitat. We consider monitoring as a partial
4 mitigation. However, we see that as being an
5 undertaking that would require more capacity.
6 Those are the lines of questions that I
7 have. However, we have some other ones here.
8 Magnolia...?
9 MS. MAGNOLIA UNKA-WOOL: Magnolia
10 Unka-Wool, legal counsel with LKFN. You stated that
11 grayling migrate in the system, but you don't believe
12 that they reside in the system. I think that's a
13 correct statement in that what actually happens in
14 these streams is that the fish spawn and the
15 reproduction of the entire fish species takes place in
16 this -- these streams.
17 You stated that you think a combination
18 of monitoring and observation would be adequate. If
19 that's correct, what fish monitoring are you actually
20 planning to conduct? I know that you did state that
21 you were hoping to engage Nahanni Butte as part of
22 that monitoring, but it takes more than just
23 observation from normal lay people. You need actual
24 biologists, fish biologists, and other people there to
25 complete studies that would adequately address the

1 velocity, the total suspended solids, and the
2 turbidity in that stream in order to ensure that the
3 fish habitat is not completely destroyed.
4 MR. DAVID HARPLEY: It's Dave Harpley.
5 So there was quite a bit of discussion there in -- in
6 those statements, so I'll try and address the
7 specifics. As far as the grayling wipeout, I -- I
8 guess I can't really comment on that, because I don't
9 know the -- the background to it and -- and what might
10 have been responsible to it -- for it.
11 What I do know is that in our situation
12 it's a headwater low productivity system. And as far
13 as species habits in the area, it's possible that
14 there is a resident population further upstream where
15 there are some pools. We're talking in the location
16 of kilometre approximately 25 to 29.
17 However, those pools aren't exceedingly
18 deep and they're downstream from areas where we've
19 observed groundwater flow during the wintertime. So
20 fish may survive the winter in that location, but
21 because of icing it's not by any means a guarantee
22 that they will.
23 So at this point in time we can't say
24 that they're actually resident species. Certainly
25 they've been seen there, so they either are resident

1 or they migrate. So our monitoring is, as I said,
2 focused on ensuring that the realignment is comparable
3 to the existing channel. That monitoring would be
4 conducted by professionals because it does require the
5 use of devices, flow metres, so either professionals,
6 or over time people that can be trained to do the work
7 reliably.
8 We're not adv -- advocating or
9 proposing that individuals undertake the work that are
10 not suitable trained and able to do the work. It's
11 just in terms of monitoring the actual fish
12 themselves. As we mentioned earlier there are
13 practical limitations in doing that and we're not
14 sure, for the reasons given, that even if we find the
15 fish; did they migrate or are they resident?
16 The important thing is that they're
17 able to migrate, just they are able currently.
18 MR. DEAN HOLMAN: Madam Chair, thank
19 you. And there's a couple of statements in there --
20 THE CHAIRPERSON: State your -- state
21 your name for the record.
22 MR. DEAN HOLMAN: Sorry, Dean -- Dean
23 Holman, from Liidlii Kue First Nation.
24 A couple of statements that were made
25 in terms of the success rate on -- on harm -- harmful

1 alteration, disruption, and destruction to fish
2 habitat.
3 There was a report in 2006 through
4 Quigley (phonetic), and it -- basically it was a
5 review of the Fisheries Act. And they had determined
6 in that report, or concluded, that a high percentage,
7 63 percent, to be exact, but 63 percent of -- of
8 projects experienced net losses, 25 percent
9 experienced no net loss, and then the remaining
10 percentage experienced a net gain, 12 percent, I
11 believe.
12 So in -- in -- within that, I see, you
13 know, the -- the statement that was made on -- on
14 success rates on fisheries -- or sorry, on
15 realignments to be -- to be incorrect or maybe even in
16 -- inadmissible due to, you know, the extensive review
17 of the Fisheries Act.
18 We're also in a place where the unique
19 position -- or unique place where the Fisheries Act is
20 be -- in terms of realignments and creation of -- of,
21 I guess, compensat -- compens -- what's the word?
22 It's basically a replacement for the loss of fish
23 habitat.
24 We're in a place right now where that -
25 - where the Fisheries Act is under review. And, in --

1 in essence, what they are trying to do is reinstate --
2 reinstate measures, protection measures, to -- to
3 increase the protection, especially on reproductive --
4 reproduction zones or reproduction areas for fish.
5 Now, in terms of headwaters and Arctic
6 grayling, the Arctic grayling depend on those
7 headwaters for reproductive purposes, and that is why
8 we consider this to be -- you know, this alignment to
9 be -- to be -- to cause serious harm to -- to fish.
10 And for that reason -- for that reason,
11 you know, it's -- it's something that we're not --
12 we're not confident in -- in Canadian Zinc's review or
13 -- or evidence, or lack of it, where there is a lack
14 of information or evidence that provides, you know, a
15 level of confidence that there will be a net gain in
16 terms of grayling production rather than -- rather
17 than the loss that we see and the rest of -- the rest
18 of the -- the fisheries professionals who are in
19 charge of -- of this jurisdiction matter see as being
20 inadequate. Thank you.
21 MR. DAVID HARPLEY: It's Dave Harpley.
22 Well, I guess I would have to say that we disagree
23 with your characterization. We don't see there being
24 any significant alteration in Arctic grayling
25 productivity as a result of the realignment. We see

1 productivity being exactly the same as it is
2 currently.
3 As far as habitat goes, it's our
4 feeling that the realigned channel will provide
5 comparable habitat to the existing channel. So, in
6 that respect, we think that there will -- there will
7 be no actual loss. However, the Act and DFO have
8 determined that it is considered loss and, therefore,
9 we have to offset.
10 And the offset we've proposed is the
11 over wintering habitat which is significantly lacking
12 in the system. So, in fact, we believe we're going to
13 be enhancing habitat and, therefore, enhancing
14 productivity, quite the opposite to -- to your
15 conclusion.
16 The other thing I want to point out is
17 that we did discuss the approach to the road
18 construction in this area with Nahanni Butte in a
19 community meeting, and we discussed the options of
20 bridges versus realignment. And the community was in
21 unison and strongly voiced their opinion that they
22 preferred the realignment.
23
24 (BRIEF PAUSE)
25

1 MS. MAGNOLIA UNKA-WOOL: Magnolia
2 Unka-Wool, LKFN.
3 Madam Chair, we're asking if we can
4 please stand down for a bit and maybe listen to what
5 some of the other parties' questions may be. And we
6 may have further questions to come back to if that is
7 all right.
8 THE CHAIRPERSON: There will be an
9 opportunity for you to ask questions, yes.
10 MS. MAGNOLIA UNKA-WOOL: Okay. Thank
11 you.
12 THE CHAIRPERSON: Thank you.
13 Questions to the presentation, Nahanni
14 Butte Dene Band?
15 MS. JAYNE KONISENTA: Jayne Konisenta.
16 This is not a question, but I just wanted to comment
17 on -- I'm going to say it in my language.
18
19 (INTERPRETED FROM SOUTH SLAVEY LANGUAGE INTO ENGLISH)
20
21 MS. JAYNE KONISENTA: In the mountain,
22 it doesn't -- doesn't always flow. Sometimes --
23 sometimes the river -- the river channels and we still
24 have the fish in the water. The river, there's always
25 -- it flows, whatever.

1 And then we see them in the fall, and
2 then sometimes there's a lot of water, sometimes
3 there's less. Sometimes it flows fast, sometimes --
4 sometimes in the fall, in -- in summer and in the
5 spring the channel changes.
6 Why -- why they are making such a fuss?
7 We want to work. We want to create -- I don't want to
8 see any -- so the Chief wants to work with this, but -
9 - but the people -- but the ones that are working
10 sound -- sound different.
11 So we do this. That's why we don't go
12 ahead. We sit here all day, and we keep sitting and
13 sitting. How many years we've been doing that? We're
14 still continuing that. So we want to move ahead.
15 We -- we didn't come here to sit here
16 and visit with you all day. Our Elders are all
17 sitting here. Whatever they want -- we -- we are
18 visiting you. That's why we don't speak what we --
19 whatever we think. This is -- we still think that we
20 -- how we think and it's behind us.
21 We have that park reserve. If we don't
22 -- if -- if we don't say yes, you won't be
23 participating and saying Look at the park. It's so
24 huge. And now you're saying this and that, and we --
25 this is how we exist.

1 We -- we -- the -- the white people
2 like Obono (sic) made this paper. My Elders, he's
3 embarrassed about his name. Why is -- why did he make
4 this papers? He lives such a far away and we live
5 here. And none of -- none of them even come here, and
6 yet they made this big pa -- report.
7 And we sit here with you, and then --
8 and then -- and you keep bringing up questions. And
9 we want to move ahead for the future. Thank you.
10
11 (INTERPRETATION CONCLUDED)
12
13 THE CHAIRPERSON: Comments from
14 Nahanni Butte Dene Band?
15 MR. GARTH WALLBRIDGE: Thank you,
16 Madam Chairman. Garth Wallbridge. No questions,
17 thank you.
18 THE CHAIRPERSON: Questions, Natural
19 Resource Canada?
20 MS. VICTORIA THOMAS: Victoria Thomas,
21 with Natural Resources Canada. We have no questions.
22 THE CHAIRPERSON: Questions, Parks
23 Canada Agency?
24 MS. ALLISON STODDART: Allison
25 Stoddart, with Parks Canada. We have no questions.

1 THE CHAIRPERSON: Questions, Board
2 staff or counsel?
3 MR. TOBY PERKINS: My name's Toby
4 Perkins. I'm a technical advisor to the Board.
5 I think -- at least my first question
6 was going to be quite similar to a lot of the -- the
7 comments and questions that Dehcho and Liidlii Kue
8 First Nations have made. So I'm going to try and
9 modify things here a little bit. Hopefully it's not
10 too repetitive, but also try and bring in a little bit
11 of new context.
12 Okay. So the Sundog Creek diversion
13 channel is an important project component within --
14 within a national park. Sundog Creek is a braided
15 gravel-bed river with complex hydraulic, geomorphic,
16 and habitat interactions. Parks Canada submitted a
17 paper by Hauer, et al, indicating that -- indicating
18 the gravel-bed river flood plains are an ecological
19 nexus of glaciated mountain landscapes because of
20 their importance to nutrient cycling, aquatic, avian,
21 terrestrial animal specials, and sustaining native
22 plant and animal biodiversity, for exa -- et cetera.
23 So up to this point Canadian Zinc has
24 provided evidence on -- has not provided evidence of
25 successful diversions in similar river types to the

1 Board for -- to consider as proof of concept.
2 Therefore, the understanding of the risk which
3 includes likelihood and consequence of failure of the
4 project component is necessary.
5 So I guess the question is: Does Can
6 Zinc believe that their proposed realignment, we've
7 talked about the likelihood success of it --
8 likelihood of a success for maintaining fish and fish
9 habitat, does Can Zinc also believe that the proposed
10 realignment can maintain the -- the natural character
11 of this river and system in this area, given its
12 complex braided morphology and processes?
13 MR. DAVID HARPLEY: Dave Harpley.
14 The short answer is, Yes. We wouldn't
15 be proposing it if we didn't think that. But also
16 bear in mind that, as I think you understand, it is a
17 fairly dynamic system and that's specifically why we
18 think the best option is to realign the channel. And
19 if it wants to do minor deviations, it's away from the
20 road and it can do so.
21 We're not constraining it in terms of
22 those minor deviations. We're just simply want to
23 provide the channel with the capacity to pass a high
24 flow event without significant change, and without
25 significant damage to the road. That's -- that's --

1 the preference is to basically allow it to do its
2 natural thing but away from the road so that it won't
3 cause damage.
4
5 (BRIEF PAUSE)
6
7 MR. TOBY PERKINS: Toby -- Toby
8 Perkins.
9 So in the proposed realignment, the --
10 yeah. So I guess we -- we see the whole river -- the
11 river flat as being part of the -- the rivering system
12 -- the valley flat being part of the rivering system.
13 And where the pro -- proposed
14 realignment, there's essentially loss of -- I don't
15 know, quite a number. I'm not sure if -- if you can
16 but just by looking at the figures it looks like a
17 loss of approximately 30 percent of that -- that
18 rivering valley flat.
19 There's certainly evidence of these
20 types of alterations to -- to braided gravel -- gravel
21 systems causing unexpected consequences, aggradation,
22 degradation, changes in -- in processes.
23 I guess my question is -- what was the
24 question? I'll -- I'll leave it as a comment, I
25 guess, just that the -- the evidence of -- of

1 significant changes beyond what might be expected in
2 these types of -- types of systems. I -- I guess
3 following on to that, so in -- in -- exis -- sorry.
4 THE CHAIRPERSON: Mr. Harpley, you
5 have a response?
6 MR. DAVID HARPLEY: It's Dave Harpley.
7 Yes. See -- as you made a comment, I'd
8 like to be able to respond to the comment. I don't
9 quite understand where you get the 30 percent loss or
10 what that relates to, but a comment of my own would
11 be, yes, natural changes may occur.
12 We're not denying that but they occur
13 now. We're not changing anything. We're just simply
14 encouraging the creek to go on a course that it
15 previously used to use. So it's not something that
16 doesn't -- hasn't happened naturally in the past.
17
18 (BRIEF PAUSE)
19
20 MR. TOBY PERKINS: Okay. That's --
21 okay. So Can Zinc has already committed to -- to
22 monitoring. There's been some discussion about the --
23 the velocities and channel capacity that would be
24 monitored.
25 Can you describe the triggers that will

be developed in any potential feasible adaptive management if -- if unexpected changes occur, or if the depths and velocities aren't maintained due to aggradation, channel changes, that kind -- these kinds of things?

(BRIEF PAUSE)

MR. DAVID HARPLEY: It's Dave Harpley. As we've mentioned, the -- the monitoring is intended to confirm that we have similar capacity and velocities. And if we find that we don't have them and there could be an impediment to migration, then we'll at -- at that point determine what adjustments should be made in the subsequent dry period so that they are appropriate for the following season.

(BRIEF PAUSE)

MR. TOBY PERKINS: The original proposal for alignment at Sundog Creek extended from approximately KP 35 to -- to 38, so it went beyond the confluence of their -- tributary from the north. And then the -- the realignment was sub -- subsequently

1 reduced to the current one (1), 1 1/2 kilometres, what
2 -- whatever it is.
3 So in that lower section, it was
4 determined that the road could be protected and the
5 river could be allowed to continue its natural
6 process. Why was -- why was that similar alternative
7 of armouring the road alignment between KP 35 and 38
8 decided to be unfeasible or -- or not appropriate?
9 MR. DAVID HARPLEY: It's Dave Harpley.
10 I believe we covered this in the technical session,
11 but just to reiterate, the reason we abandoned the
12 realignment downstream is because of the major
13 tributary that comes in from the north would make it
14 very difficult to maintain any realigned creek.
15 It would always want to go to the south
16 bank. So in other words, it -- hydraulics -- or a
17 hydrologist determined that the realignment would not
18 likely be sustained. And for that reason we abandoned
19 it. And in fact, there's -- there's only a couple of
20 really rather small sections of the creek that would
21 impinge on the road.
22 Therefore, we opted to a solution of
23 basically doing a minor channel shift in terms of
24 location and armouring the bank. In terms of why we
25 didn't select the same approach for the re --

1 realignment we're proposing, is because in that
2 particular reach we believe the realignment will
3 survive and there won't be any loss of the
4 realignment.
5 And where we propose to put the road is
6 a -- a rather long section of the creek where the
7 channel is directly in the footpr -- would be directly
8 in the footprint of the road.
9 And it's just our belief and conclusion
10 that rather than shifting over a kilometre of the
11 creek that it would be then adjacent to the road and
12 you would have interaction between the creek and the
13 road, potentially. And also in a high-flow situation,
14 direct contact between those flows and the creek.
15 We concluded that the better option was
16 to divert the creek into the old channel that it used
17 to occupy in the past.
18
19 (BRIEF PAUSE)
20
21 MR. TOBY PERKINS: Can Zinc. I'm
22 moving to stream crossing now.
23 THE CHAIRPERSON: State your name
24 again for the record.
25 MR. TOBY PERKINS: Toby Perkins, for

1 the Board. So Can Zinc is committed to designing
2 stream crossings to appropriately pass the 1 percent
3 annual exceedance probability event. I guess that's
4 more commonly referred to as the hundred-year flow
5 event.
6 But I guess stat -- statistically
7 there's a -- approximately an 18 percent probability
8 of a hundred-year event occurring within a twenty (20)
9 year design life. Earlier on in the discussions you
10 talked about the previous road being washed out during
11 a -- a large event, whatever their temporary may have
12 been for that event, and that caused impact to fish
13 and fish habitat.
14
15 (BRIEF PAUSE)
16
17 MR. TOBY PERKINS: So the question is:
18 Do you believe that a hundred year
19 event is appropriate for -- for the crossings here,
20 given the expected life of the project? And I guess,
21 what is the rationale for the hundred year event being
22 chosen for that -- for the crossing designs?
23 MR. BILL ROZEBOOM: Bill Rozeboom,
24 Tetra Tech, for Canadian Zinc.
25 The hundred year is a standard

1 regulatory level just used for all sorts of things,
2 for common -- in Alberta, at least, for bridge
3 crossings, in the US, for bridge crossings, for flood
4 plain mapping. It's just a standard acceptable level
5 of risk for designing of water crossings.
6
7 (BRIEF PAUSE)
8
9 MR. TOBY PERKINS: Toby Perkins. So
10 just, I think, one (1) more question from me with
11 respect to stream crossings.
12 So within the DAR, there were eighteen
13 (18) major crossings identified, and ninety (90) minor
14 crossings identified, which is approximately one (1)
15 crossing every 1.8 kilometres, just to average things
16 out.
17 I haven't got the figure here, but I
18 was just looking at one (1) section of the -- the
19 alignment that's shown in -- in Sundog Creek. And
20 there's -- on the -- on the mapped -- map stream
21 crossings, there are three (3) or four (4) within a
22 half kilometre section, so this is just an example.
23 I'm not suggesting that that's typical or anything
24 else, but it seems to disagree -- or seems contrary to
25 the number that are identified.

1 (BRIEF PAUSE)

2

3 MR. TOBY PERKINS: And now the

4 crossings that I note on this -- on this one (1)

5 figure are identified and -- and the -- and the list

6 from -- and the -- and the crossings identified.

7 So although the streams are likely

8 ephemeral and -- and quite small, they may be

9 tributaries in -- they may be tributaries to fish-

10 bearing waters and could provide fish hami -- habitat.

11 If passage -- passage crossings was -- was impen --

12 impeded, there's a potentially significant loss of

13 fish habitat upstream of the crossing.

14 So I guess the question is -- is: Were

15 -- were streams of this -- were crossings of this size

16 deter -- assessed in -- in the assessment and...

17

18 (BRIEF PAUSE)

19

20 MR. TOBY PERKINS: Sorry. I guess,

21 they're -- were -- were streams of this size assessed,

22 and if not, how would general commitments and culvert

23 design and maintenance and maintain fish -- fish

24 passage? You've talked about the -- the design of the

25 culverts. Yeah, I'll leave it at that for now.

1 Sorry, if you can -- a little -- a little convoluted,
2 yeah, I ami -- admit.
3 MR. DAVID HARPLEY: It's Dave Harpley.
4 With respect to Sundog Creek, I think
5 you will need to be specific to what criss --
6 crossings you're talking about, but virtually all of
7 those crossings are non-fish bearing streams. There's
8 one (1) we believe is a fish-bearing stream, because
9 the crossing is near its mouth. All the other ones
10 are either above that significant waterfall at
11 kilometre 25, or they're extremely steep chute-type
12 crossings.
13 So there's no question in our mind --
14 in our mind that they're not fish-bearing crossings.
15 And those will be span crossings, for the most part, I
16 believe, so there would be no impediment to migration
17 if that's the issue.
18 As I mentioned earlier, on -- on the
19 smaller crossings, I think there are only a couple
20 where we kind of have a question mark in terms of, are
21 they fish-bearing or not. But we've assumed that they
22 could be and culverts would be installed and monitored
23 to ensure that a passage would still be possible for
24 migrating fish.
25

(BRIEF PAUSE)

MS. KATE MANSFIELD: This is Kate Mansfield, with the Review Board. I just have one (1) quick question on fish and fish habitat.

So Can Zinc is on the record saying that it will attempt to mimic as much as possible the flow conditions and velocities in the diversion channel that currently exist in the existing channel.

However, you've also stated that part of your design will include deepening and widening the diversion channel in order to accommodate a one (1) in one hundred (100) year flood event, which would presumably be accompanied with higher flow velocities and -- and the need for a -- a wider channel to accommodate that water.

And you've also said that one (1) of the key criteria for grayling migration is flow velocity.

So I'm just wondering if Can Zinc sees any problem with meeting these two (2) objectives of accommodating the one (1) in one hundred (100) year flood event and mimicking the existing conditions in the natural channel, if -- if you able to meet those two (2) different objectives simultaneously within the

1 same diversion channel.

2 MR. DAVID HARPLEY: It's Dave Harpley.

3 Well, I think again, the short answer is yes. The

4 capacity side of the argument is simply providing

5 enough width and depth that the one hundred (100) year

6 flood can occupy the channel and not avulse somewhere

7 significantly.

8 And the flip side, in terms of habitat,

9 again, we're recreating the situation in the adjacent

10 existing channel in terms of habitat characteristics,

11 which are a combination of some boulder refuge habitat

12 and primarily run and riffle. So I don't believe we

13 see any obstacle in achieving both objectives.

14

15 (BRIEF PAUSE)

16

17 MS. CATHERINE FAIRBAIRN: Thank you.

18 This is Catherine Fairbairn, Review Board staff.

19 I have a question about acid rock

20 drainage and metal leaching. So Environment and

21 Climate Change Canada raised acid rock drainage and

22 metal leaching concerns in its technical report.

23 And I understand the concern was -- one

24 (1) of the concerns, anyway, was about the potential

25 use of marginal acid rock drainage and metal leaching

1 borrow sources. And they made a recommendation that
2 these locations not be used. And Can Zinc has stated
3 that positive acid rock drainage and metal leaching
4 loca -- borrow won't be used, but that marginal borrow
5 may be used.
6 So my first question on this topic is:
7 What would you consider marginal acid rock dain --
8 drainage and metal leaching potential?
9 MR. DAVID HARPLEY: It's Dave Harpley.
10 Based on the original questions from the IRs and our
11 replies, it seems we all got hung up on the word
12 "marginal" to the extent that I felt that it was
13 preferable to just drop that word from consideration,
14 which we've now done in our technical report reply.
15 And we're simply saying that we'll
16 engage a professional to study this and follow their
17 recommendations, whatever they are. So I think that's
18 the preferred approach.
19 MS. CATHERINE FAIRBAIRN: Thank you.
20 Catherine, with the Review Board.
21 So on that note, I suppose, what type
22 of mitigation do you think a professional geochemist
23 might suggest that would allow you to use some of the
24 borrow sources that aren't positive acid rock drainage
25 and metal leaching potential, but do have what we

1 originally were -- you're right, possibly a bit
2 confused or -- about in terms of marginal potential.
3 So what mitigation do you imagine could
4 help resolve that situation?
5 MR. DAVID HARPLEY: It's Dave Harpley.
6 I'm not a geochemist, so I'm reluctant
7 to speculate. But based on experience, I would think
8 the first mitigation selection would be simply don't
9 use that pit -- borrow pit, use another one or a
10 different part of it.
11 And they may -- and they may propose
12 miti -- mitigations beyond that if it's still
13 desirable to use that material. But maybe it's not
14 appropriate for us to go any further in the
15 speculation at this point.
16
17 (BRIEF PAUSE)
18
19 MS. CATHERINE FAIRBAIRN: Moving on, I
20 have a question -- this is Catherine, with the Review
21 Board -- I have a question about invasive species, so
22 -- in terms of vegetation.
23 So as you know, invasive species can be
24 very difficult to eliminate once they spread into an
25 area. And Can Zinc has provided an invasive species

1 management framework, and that includes a list of
2 invasive species that have been documented in the
3 Northwest Territories.
4 The framework indicates that not all of
5 those species have to be controlled. And as a result,
6 it's unclear which species will be controlled.
7 So I was wondering if Can Zinc would
8 comment on how you plan to determine which of that
9 fairly long list of species do need to be controlled,
10 who might be involved, or how you would make that
11 decision.
12 MR. DAVID HARPLEY: It's Dave Harpley.
13 I don't believe our vegetation consultant is on the
14 phone. Amy, are you on the phone?
15 MS. AMY MCCLENAHAN (BY PHONE): Yes,
16 actually --
17 MR. DAVID HARPLEY: Okay. Good. So
18 on the phone from Tetra Tech is Amy McClenahan,
19 consultant to us on the vegetation.
20 Did you hear the question clearly
21 enough to answer, or do you need it repeated?
22 MS. AMY MCCLENAHAN (BY PHONE): (AUDIO
23 PROBLEMS).
24 MS. CATHERINE FAIRBAIRN: Yes, that's
25 correct. That's what the invasive species management

1 framework says.

2 MS. AMY MCCLENAHAN (BY PHONE): I

3 guess (AUDIO PROBLEMS).

4 MS. CATHERINE FAIRBAIRN: Thank you

5 for the answer. This is Catherine, with the Review

6 Board.

7 So is this something that Can Zinc will

8 determine on its own, or will you be -- you'll be

9 consulting with your specialists or with regulatory

10 agencies, or how do you plan to identify sort of the

11 most critical species, given that there's quite a

12 lengthy list that includes ones that aren't important

13 -- or as important?

14 MR. DAVID HARPLEY: It's Dave Harpley.

15 Hang on, Amy. It's Dave Harpley here.

16 I personally am struggling to hear all

17 the interaction, and I'm thinking rather than putting

18 Amy on the spot here, maybe you should pose that as a

19 question that we can answer later, or potentially an

20 undertaking. Just a bit reluctant to give an off-hand

21 response in this situation.

22 MS. CATHERINE FAIRBAIRN: Catherine

23 Fairbairn. That's fine.

24 MS. AMY MCCLENAHAN (BY PHONE): (AUDIO

25 PROBLEMS).

1 MS. CATHERINE FAIRBAIRN: All right.
2 Thank you. This is Catherine again -- oh.
3 MR. DAVID HARPLEY: Yeah. It's Dave
4 Harpley. I'm -- I'm struggling to hear Amy and,
5 again, I think we should have a considered opinion
6 after we've discussed it internally and then we'll
7 respond to you.
8
9 (BRIEF PAUSE)
10
11 MR. JOHN DONIHEE: Madam Chair, it's
12 John Donihee.
13 Mr. Harpley, I think we prefer to
14 repose the question just so it -- everyone's clear on
15 -- on what the task is and identify it as Undertaking
16 Number 4. And certainly if you can respond to it
17 before the end of the hearing, that's great, but if
18 not, then by the time of the -- the date set for
19 undertaking submissions.
20 So I'll ask that the question be posed
21 again just for clarity.
22 MS. CATHERINE FAIRBAIRN: Sure.
23 Catherine Fairbairn. So the question is:
24 How -- based on this list that's in the
25 invasive species management framework, how will Can

1 Zinc determine which invasive species are problematic
2 enough to be controlled and who will be involved in
3 that decision?
4
5 --- UNDERTAKING NO. 4: Describe how Can Zinc will
6 decide which species needs
7 to be controlled and who
8 will be involved in this
9 decision and in managing
10 invasive species.
11
12 (BRIEF PAUSE)
13
14 MS. CATHERINE FAIRBAIRN: I have --
15 this is Catherine, again. I have one (1) follow-up
16 question on evasive species.
17 So originally when Can Zinc committed
18 to wash the wheels of vehicles on their way to the
19 mine as a form of invasive species control, this was
20 at the Liard transfer facility, which was, I believe,
21 about a kilometre off of Highway 7.
22 And in this situation the Liard River
23 would also be a natural berry -- barrier to the spread
24 of invasive species. I understand that the Liard
25 transfer facility has now been sort of moved or

1 combined with the location that will be on the north
2 side of the barge crossing.
3 So my question is: Will the wheel
4 wash, now being on the north side of the river, affect
5 invasive species control?
6 MR. DAVID HARPLEY: It's Dave Harpley.
7 It would either be on the south side or the north
8 side.
9
10 (BRIEF PAUSE)
11
12 MS. CATHERINE FAIRBAIRN: Catherine.
13 So I understand the wheel wash could be on the south
14 side of the river. Is that correct?
15 MR. DAVID HARPLEY: Dave Harpley.
16 That's correct. It could be on the south side, or
17 north side.
18
19 (BRIEF PAUSE)
20
21 MS. CATHERINE FAIRBAIRN: All right,
22 that's -- this is Catherine. That's good to know. We
23 have more concerns with the wheel wash being on the
24 north side of the river just because there's -- that's
25 an area that's less likely to have invasive species.

1 So if it was on the south side it would
2 be more likely that the river would also act as an
3 additional barrier to spread. That is all of my
4 questions.
5 THE CHAIRPERSON: Questions from Board
6 members?
7 MR. DAVID KRUTKO: David Krutko. My
8 question is: I'm not too clear, has there been a
9 hydrology study done in regards to the barrier that's
10 going to be put in the -- the Sundog Creek, and is
11 that study available?
12 MR. BILL ROZEBOOM: Bill Rozeboom,
13 Tetra Tech. Yes, we have assessed a study.
14 The nature of the study is presented in
15 one (1) of our existing reports, letter reports. And
16 the study takes the -- the hundred year water level,
17 it looks at the barrier berm, and the primary for the
18 placement of the berm, the primary consideration is
19 what is the water level that it has to hold up. So
20 the berm has been designed to be higher than that
21 water level.
22 THE CHAIRPERSON: Questions from Board
23 members?
24 MS. BERTHA NORWEGIAN: Bertha
25 Norwegian. I have a question regarding the area where

1 you have fast moving waters. And because you're build
2 -- building the road on the opposite side, how does it
3 impact on your fast move -- moving waters or the
4 rapids section? Because given the -- the terrain and,
5 you know, weathers being really unpredictable, if you
6 have a lot of rainfall you're still going to have a
7 lot of water in the -- in your old channel.
8 And so if you have a fast moving body
9 of water and you're putting in a new road, is it
10 anticipated that that fast moving body of water is
11 going to be going through a culvert where your new
12 road comes to a point over a KP 37?
13
14 (BRIEF PAUSE)
15
16 MR. DAVID HARPLEY: It's Dave Harpley.
17 So when the diversion is in place, the
18 main channel would be diverted to the old channel, and
19 the -- where the existing channel is now will cease to
20 carry any significant flow of water.
21 So even in a high water situation,
22 we're not expecting that there would be any
23 significant high water, or vel -- high velocity water
24 adjacent to the road because it's simply not attached
25 to the main stream anymore. There may be, because of

1 an elevated groundwater level, more visible water in
2 the -- in the existing channel adjacent to the road
3 but with no erosive force.
4 MS. BERTHA NORWEGIAN: Bertha
5 Norwegian.
6 Water is a very unpredictable thing. I
7 mean, we never really know how it's going to move, and
8 I don't think that we can say that, you know, a one
9 (1) in one hundred (100) year flood example is
10 something that I would accept.
11 My concern is that when you're -- you
12 have fast moving waters moving over into the new
13 channel that you're going to be building, you're going
14 to have your rainy season so that would heighten the
15 water level while it's being moved over to your new
16 road section.
17 And also at the same time what happens
18 to all of the -- the plant life, or algae, or any of
19 the river bottom feeding -- what's the word I'm
20 looking for, the food that the feed fish off -- or the
21 fish feed off because you're taking all of that away
22 while at the same time you're putting in a location of
23 over wintering pools, so where are they going to get
24 their food?
25

1 (BRIEF PAUSE)

2

3 MR. BILL ROZEBOOM: Bill Rozeboom,

4 Tetra Tech.

5 There are two (2) aspects to the

6 question. I'll try to address the high flow issue.

7 In the high flow issue, we are enlarging the old

8 historic channel to have the same capacity as the

9 present existing channel.

10 After that, increase capacity by making

11 it a little bit deeper/a little bit wider, is complete

12 the existing channel will be -- will be blocked off.

13 So the high rain situation that occurs after this work

14 is done, all that additional water with all the

15 sediment movement will be relocated to the old

16 historic channel, which we're calling the realigned

17 channel.

18 And it will have the capacity to convey

19 that water much in the same way as existing. It will

20 be carrying sediment. There will be some localized

21 shifting but all of this will occur away from the

22 road. And from the engineering perspective, our main

23 goal is to protect the road and shelter it from the

24 high velocity water.

25 MS. BERTHA NORWEGIAN: Bertha

1 Norwegian. So...

2

3 (BRIEF PAUSE)

4

5 MR. JOHN WILCOCKSON: Thank you. John

6 Wilcockson, Hatfield.

7 So I just want to talk a little bit

8 about the productivity of the system. It's -- it's a

9 mountainous area, very little in the way of riparian

10 vegetation around the sides, visibly very little

11 growth in the way of microphytes in the system or

12 periphyton on the rocks.

13 There will be benthic invertebrates in

14 there. It's true that they will be used by the fish

15 as a food source. But the things to remember is that

16 this is a very small section of the river, of the

17 creek overall and it's going to be a very temporary

18 loss of those organisms for a section that would

19 naturally often dry up anyway and those organisms

20 would be lost.

21 So the same sort of mechanisms would be

22 used as a natural way of repopulating that area. So

23 what would happen is you have drift insects coming

24 from upstream, and they would essentially inoculate

25 again the -- the new channel. And you're also going

1 to have egg laying adult benthic invertebrates that
2 will come and -- and help establish that.
3 So, in our opinion, that -- that
4 mechanism is going to take a very short time. It may
5 not take that much longer than the natural mechanism
6 from -- from when the creek naturally dries up.
7
8 (BRIEF PAUSE)
9
10 THE CHAIRPERSON: Questions from Board
11 members?
12 MS. YVONNE DOOLITTLE: Hi there. This
13 is Yvonne Doolittle. Just sort of in line with that.
14 So to -- looking at slide 14, you sort of demonstrate
15 it's a very small portion.
16 So upstream of that is there any other,
17 what do you call them, overwintering pools that are in
18 existence that you know about that maybe fish do --
19 are in there, or is that the last area that you sort
20 of have observed and have proof that -- that fish hang
21 out there during winter or maybe get trapped because
22 of low water years?
23 I don't -- I'm not sure why they would
24 stay, but do you know if they -- there is any further
25 beyond that into the mountains?

1 MR. DAVID HARPLEY: It's Dave Harpley.
2 So we -- we've seen grayling in small side channels in
3 the kind of wide food -- floodplain area which extends
4 from kilometre 29 to 40. And then upstream of
5 kilometre 29 is the more mountainous steeper section
6 where you've basically got mini waterfalls and pools.
7 And -- and in that 25 to 29 section
8 it's possible that the pools could be deep enough that
9 fish are able to overwinter in that location.
10 However, as I mentioned earlier, because of icing,
11 it's also possible that they don't survive, they
12 actually completely freeze to the bottom and don't
13 survive.
14 If -- if the fish between kilometre 40
15 and 29 reside in those small side channels or pools
16 we're pretty certain they wouldn't survive the winter
17 because we know that the water levels do drop quite
18 significantly and that all those pools dry out and
19 likely there would be mortality.
20 THE CHAIRPERSON: Okay. At this time,
21 we would like to call a fifteen (15) minute long
22 deserved break.
23
24 --- Upon recessing at 10:50 a.m.
25 --- Upon resuming at 11:18 a.m.

1 THE CHAIRPERSON: Okay, at this time,
2 what I would like to do is go back to Liddlii Kue
3 First Nations and ask if they had some questions. And
4 I will also ask Dehcho First Nations for a few
5 questions. And after consultating with Can Zinc and
6 the different parties, Parks Canada has one (1)
7 question that they would like to ask, too.
8 So, Liidlii Kue First Nations, you're
9 first up.
10 MS. MAGNOLIA UNKA-WOOL: Thank you,
11 Madam Chair. Magnolia Unka-Wool, with LKFN. At this
12 point we don't have any further questions, and we'll
13 probably direct our questions to some -- following
14 some of the presentations this afternoon.
15 THE CHAIRPERSON: Mag -- Magnolia
16 would you be so kind just to wait? Joseph, have you
17 got your team together? Mr. Harpley, you're a wanted
18 man.
19
20 (BRIEF PAUSE)
21
22 THE CHAIRPERSON: Sorry about that.
23 Liidlii Kue First Nations, Magnolia?
24 MS. MAGNOLIA UNKA-WOOL: Thank you,
25 Madam Chair. Magnolia Unka-Wool, with LKFN. At this

1 point we don't have any further questions, and we will
2 probably direct our questions following the
3 presentations this afternoon. Thank you.
4 THE CHAIRPERSON: Questions, Dehcho
5 First Nations?
6 MS. CARRIE BRENEMAN: Carrie Breneman,
7 Dehcho First Nations. David, I just wanted to follow
8 up on one (1) of the comments that Toby Perkins made.
9 He was asking about what baseline fisheries work you
10 did along the new road alignment.
11 Could you just clarify what -- what
12 work you did for fisheries along parts of the road
13 that are not along the winter road alignment and
14 they're new?
15
16 (BRIEF PAUSE)
17
18 MR. JOHN WILCOCKSON: John Wilcockson,
19 with Hatfield Consultants, Madam Chairman. We have
20 done some electrofishing downstream of the -- the
21 proposed diversion breach. I would say it was just a
22 couple of hour of -- of -- probably about an hour of
23 electrofishing.
24 And looking both at the -- the main
25 channel of Thalweg Lake, as well as the side channel

1 that was located there. And in that, we found that
2 the side channel is where the fish were. We found
3 little sculpin and grayling.
4 The other information that we have for
5 that area of the -- of the Sundog is that -- is it's -
6 - this is from Parks Canada in that they have observed
7 grayling higher up above the diversion. I don't know
8 much more than that, but there has been grayling found
9 there as well in -- sorry, in the pools above the
10 diversion area.
11 MS. CARRIE BRENEMAN: Carrie Breneman,
12 Dehcho First Nations. Sorry, I wasn't asking about
13 the Sundog Creek realignment. I meant the new
14 alignment of where the all-season road goes. On day 1
15 of presentations, there was mention that there wasn't
16 evidence of fish habitat, or there wasn't known to be
17 fish there. And I was just wondering what was done to
18 look for fish along the new portions of the alignment
19 of the all-season road.
20 MR. DAVID HARPLEY: It's Dave Harpley.
21 So just to be clear on what section we're talking
22 about, are we talking about the alignment between
23 Grainger Gap and Wolverine Pass?
24 MS. CARRIE BRENEMAN: I mean like for
25 -- kind -- I think on the map it was from basically

1 Liard -- the Liard crossing west or north. So it was
2 the new portion of the all -- the all-season road
3 where it doesn't follow the old winter load -- road
4 alignment.
5 Is -- is that clear?
6 MR. DAVID HARPLEY: Dave Harpley.
7 Okay. Yes, now I -- I know where you mean.
8 So that alignment, John and I flew that
9 alignment several years ago and looked at the
10 locations of the crossings and they're mostly head
11 water crossings. And the channels are very small,
12 they're ill-defined in most places.
13 And what we also found in subsequent
14 visits is that downstream there are multiple beaver
15 dams in the wetland areas where the -- many of these
16 streams coalesce before they discharge into either
17 Grainger River or Liard River to an extent that it was
18 felt that both the habitat quality was very poor in
19 the crossing locations and downstream.
20 And in addition, the -- the feeling was
21 that there was no significant potential for it to be
22 fish habitat and that -- that was our conclusion.
23 MS. CARRIE BRENEMAN: Carrie Breneman,
24 Dehcho First Nations.
25 So just to clarify, you decided that

1 these streams were not bearing fish due to what you
2 saw out of a helicopter and -- and how you felt about
3 them from the air?
4 MR. DAVID HARPLEY: We did the
5 helicopter reconnaissance. We also visited a number
6 of these locations on the ground. And if you refer
7 back to the record of the -- the last EA for the
8 winter road, this alignment was also surveyed by
9 Dillon Consultants who did much the same thing and
10 they also did on-the-ground work along the front range
11 and they came to a similar conclusion.
12 MS. CARRIE BRENEMAN: Carrie Breneman,
13 Dehcho First Nations. Thanks for your answers, David.
14 We have no further questions.
15 THE CHAIRPERSON: Thank you.
16 Questions, Parks Canada?
17 MS. ALLISON STODDART: Thank you,
18 Madam Chair. Allison Stoddart, with Parks Canada.
19 And apologies that we're asking this a
20 little bit out of -- out of order, just in light of
21 the discussions that we've had today about Sundog
22 Creek, we were wondering if Canadian Zinc could just
23 give us a better idea of exactly what's going to
24 happen between kilometre 24 and 29.
25 They've indicated yesterday in their

1 presentation that they will be -- they're proposing to
2 construct the original permitted winter road in that
3 area, as well as the all-season road alignment. We
4 just want to understand exactly what will be happening
5 in that area with regards to when that construction
6 will be happening and if -- when the alignments will
7 be used, and in terms of crossings, how will they be
8 constructing those potential crossings that were
9 identified for the winter road?
10 MR. DAVID HARPLEY: It's Dave Harpley.
11 So our plan is that the initial winter road would
12 utilize the currently permitted winter road alignment
13 on the north side of the creek, which does include
14 several crossings, which would be typical winter
15 crossings.
16 Because some of them are somewhat
17 incised, we have already considered the use of kind of
18 temporary -- I'm trying to des -- describe them, not
19 exactly bridges, but some form of structure to enable
20 the crossing without completely relying on snow fill.
21 But essentially, we would build the
22 winter road as we have proposed originally in -- in
23 the permitted -- on the permitted alignment to gain
24 access to the mine to bring in materials, and also to
25 bring in construction equipment.

1 And thereafter, we would commence to
2 build the -- the road on the south side, being on the
3 pro -- proposed all-season alignment.
4 MS. ALLISON STODDART: Thank you for
5 that response. Allison Stoddart, with Parks Canada.
6 So just to confirm, when you say you'll
7 be building the winter road -- the permitted winter
8 road to bring in materials for construction, I just
9 want to clarify, and I -- I think you did this
10 yesterday already, but just so that I'm clear, you'll
11 be following the all-season road alignment in terms of
12 building a winter road other than the two (2) portions
13 that you've indicated you will use the original winter
14 road alignment, which is between 24 and 29, and 90 and
15 95?
16 MR. DAVID HARPLEY: Dave Harpley.
17 Essentially that's correct, but what I
18 also said as a qualifier perhaps that we assumed and -
19 - and maybe not everybody else is clear, is that for
20 the section between kilometre 29 and forty (40), where
21 we basically have the wide floodplain, I think there's
22 a little more flexibility there in terms of the
23 location of a winter road, given that it -- it's
24 really just a snow/ice road, and there's no need to
25 cause any additional disturbance over that section.

1 MS. ALLISON STODDART: Thanks again.
2 Allison Stoddart, with Parks Canada.
3 So just one (1) last question with
4 regard to the Sundog realignment. So does Canadian
5 Zinc see any additional potential impacts of having
6 both the original winter road alignment as well as the
7 all-season road alignment being constructed just
8 upstream of where the -- the realignment is going to
9 occur, including the winter crossings?
10 MR. DAVID HARPLEY: Dave Harpley.
11 No, because the winter road is a winter
12 road. It's -- the impacts will be minimal, and will
13 disappear the following spring so, no.
14 MS. ALLISON STODDART: Thank you. No
15 more questions from Parks Canada.
16 THE CHAIRPERSON: Nahanni Butte Dene
17 Band, you have one (1) question --
18 MR. GARTH WALLBRIDGE: We do --
19 THE CHAIRPERSON: -- or comment?
20 MR. GARTH WALLBRIDGE: -- have a
21 question if, like, just to get on the list at some
22 point. We're happy to do it now, or I'm not sure
23 where you are in terms of your list of speakers.
24 THE CHAIRPERSON: We have -- the next
25 presentation is from Fisheries and Oceans. There was

1 just the three (3) that we met before the break that
2 had a question that wasn't related to the -- the
3 presentation.
4 MR. GARTH WALLBRIDGE: Yes, and in
5 fact, at this point, then, over the break, the Elders
6 asked to speak with me, and two (2) of the Elders do
7 want to speak to this issue. And I'm not certain if
8 there is an exact question, but I do believe we should
9 hear from them, if we could, Madam Chair.
10 THE CHAIRPERSON: Okay. Would they
11 like to come to the table, or they're --
12 MR. GARTH WALLBRIDGE: If we might --
13 THE CHAIRPERSON: -- they'll be handed
14 a mic?
15 MR. GARTH WALLBRIDGE: -- have a mic?
16 Do we have a mic?
17
18 (BRIEF PAUSE)
19
20 MR. GARTH WALLBRIDGE: Yeah. So the
21 mic is working, there we go.
22
23 (INTERPRETED FROM SOUTH SLAVEY TO ENGLISH)
24
25 ELDER FLORA CLI: This is Flora.

They're always talking about the water. The water goes down. It -- it freezes -- it freezes, but the fish -- so the fish know where they live. They all gather in that, you know, location. And in the wintertime, there's no -- there's no fish, but in this -- in springtime, the fish come back. Wherever it flows, it goes -- it -- it follows.

It -- but whatever it is, there's always -- it's always like that. The -- the -- you -- you don't see -- there's no fish, then it -- it gathers in the -- for the winter, and then in the springtime, it comes back. So wherever it -- wherever it spawns, and then it -- it leaves. And then this is -- is it -- it always does that.

Wherever it lives, it -- it goes back to it. It's -- it's been like that since -- since the land was like that. My grandfather said that the -- the fished don't -- fish don't live in one (1) area, it goes wherever it needs to respawn, and they know where to winter. And then they go back there. And then they live there. And then in the springtime and around this time, they -- the -- the grayling and the small trout go back to spawn. And then -- and then in May, then they go back to -- to their wintering areas.

And then we -- they say that there's

1 nothing you -- that it isn't like that. Even when the
2 -- when there's a lot of water, there's a lot of --
3 and lots of vegetation, a lot of little insects that
4 they eat.
5 So around this time -- even now, the
6 fish are going up. They were -- they probably go up
7 the Liard, and then they spawn. And then and when
8 they -- when the leaves grow, they come back down.
9 And then in the fall time, there's no fish. We live
10 that way, get fish, it's always like that. Since the
11 land has -- so we've been there, animals are like
12 that. When there's no food, it goes somewhere to --
13 to feed, and that's where they live.
14 And so it -- so -- so it seems it is
15 like -- and -- are then I don't know anything there.
16 Even the animals are like that. Even the people are
17 like that. If we don't have anything, we will go to
18 where the food is. And then we will -- we will hunt
19 for it. And this is -- this is how we live. The
20 animals are like that. The fish are like that. The
21 people don't know about it. They -- they all say this
22 and this. And they -- they've never walked on the
23 land.
24 And then it sounds like they want -- so
25 if you've been on the land, you know how the -- the

1 land flows, and then how the -- the -- I used to go up
2 to Tetcela River. I went -- I went hunting with my
3 parents. And then they see the river dams; my
4 grandfather. So I asked my father. See -- father
5 said what was going to happen. He -- he said they --
6 he -- he said that it was like that -- it's like that
7 with the land. They -- the beaver dams are like that.
8 Those -- they -- they talk about this when I'm
9 thinking -- thinking about what's been dis --
10 discussed.
11 The fish eat whatever is in the water.
12 And then when it -- when it freezes, then -- then all
13 the -- when everything thaws out, all the little
14 animals and the insects are alive, and then they feed
15 on that, and it's been like that since.
16 The -- that's the way -- that's the way
17 it has been since the land. So -- so there's so many
18 stories that the Elders have told us as we -- so I
19 find it odd when they say all this, saying the
20 animals, this is how they survive.
21 The fish and beavers, the -- the moose
22 and caribou, wherever there's no food, they go to
23 their feeding area wherever, even the mountains. If
24 they don't have any berries, they go into the
25 mountains for berries. And then if they get fat they

1 come back to the river.

2 And -- and all the animals, that's how

3 they survive. The fish and the -- the small -- the

4 animals, that's how -- that's how they survive.

5 That's what they do. Thank you very much.

6

7 (INTERPRETATION CONCLUDED)

8

9 THE CHAIRPERSON: Masi cho.

10

11 (INTERPRETED FROM SOUTH SLAVEY LANGUAGE INTO ENGLISH)

12

13 ELDER FRANCIS BETSAKA: My name is

14 Francis Betsaka. He said I'm seventy-four (74) years

15 old. He said I have -- since I was a child, I've been

16 out on the land, so there's everything that I know

17 about the land out there. Even -- they were talking

18 about doing a different realignment for the creek.

19 And he said it's not going to ever change the way the

20 river runs. He said it's always going to continue the

21 way it is that...

22 And just recently, Jayne Konisenta had

23 made a statement. He was talk -- she talked about how

24 in the fall time, there -- in the springtime there was

25 a lot of water, and then it rechannel itself. That's

1 exactly what it does every year.

2 As we are sitting here and listening

3 back to the stories of our Elders that had to -- the

4 Elders had shared a story with us, and they told us

5 that -- and they say where we're sitting right --

6 right here used to be an island where it was kind of

7 sort of built at the end the island. And he said

8 that's where we are here today.

9 So I'm just wondering if our Elders

10 ever told the stories of our Elders. And now here

11 we're located right on the edge of the island. That's

12 where they put a whole bunch of gravel and sand, and

13 that's how our -- our community is built on.

14 And back in 1959, when I was here,

15 there was no road on the -- in the community. They

16 just had trails along the riverbank. And at the time,

17 they only had two (2) vehicles in the community. And

18 a lot of the people were living across the river, and

19 they were all located in different Fish Lakes areas.

20 And now, looking back and looking at

21 today, when everybody located themself here, it was

22 just like -- it wasn't a community. And now when

23 they're talking about the creek, I'm kind of thinking

24 about -- and -- and I know that once, if they

25 rechannel the creek, I know everything will go well.

1 And that was exactly what they did here.
2 So I just wanted to share that story
3 with you. That's all. I'm going to share the story
4 with you. Thank you. Masi.
5
6 (INTERPRETATION CONCLUDED)
7
8 ELDER FLORA CLI: Hello?
9
10 (INTERPRETED FROM SOUTH SLAVEY LANGUAGE INTO ENGLISH)
11
12 ELDER FLORA CLI: And then she said
13 exactly what Francis had said was based on the truth
14 facts about -- exactly about how the island was being
15 built. And I said there used to be a slough all the
16 way here through the Hudson Bay Company right in the
17 back. It used to be a really wide area, and it was a
18 very -- and so the people from Edmonton, they came up
19 here from the construction, and then they start
20 working in the area.
21 They start filling up with all kind of
22 sticks and different pieces of logs, and that's how
23 they built that area. And that was how the -- they
24 started building the community.
25 It used to be a big slough in the back

1 of the area. And he (sic) said there used to be a
2 little trail that went right in the middle of the
3 community. And so that was right at the end of the
4 island. It used to be an area where the oxen -- that
5 used -- they had a trail for that right at the end of
6 the island.
7 And so that was how our community was
8 located. So now you look at it, you don't -- you
9 couldn't even tell at the time how it was being built
10 right from the beginning of time.
11 And so those are kind of the stories
12 that I like to share with our Elders and everybody
13 that's here. And he said -- she said, I was raised
14 here on the island, and I was born here. And right in
15 the end of the island used to be a big pond where
16 there used to be a big beaver hut there. Now you
17 don't see that any more, and that's exactly where
18 Roderick's Garage is, right at the end of the island.
19 That used to be a big beaver house right on the
20 island.
21 And so right there, too, they filled it
22 up with all different kind of chips of wood from the
23 saw mill, and they kind of filled up the -- the dip,
24 and then they builded the road over it. So that is
25 exactly where there's a garage built over it.

1 And all these buildings were taking
2 place right in the midst of the winter. That's when
3 it was being built. And now here, when you look at
4 the Hud -- the northern store, exactly right there,
5 too, that was being built on a beaver place also.
6 And so all these -- the history of our
7 island, there's a lot of people don't know abo --
8 about it. So those are kind of the histories I wanted
9 to share with everybody. And every -- right by the
10 power plant, there used to be a slough area there,
11 too.
12 And right -- exactly right at the end
13 of the island used to be a big pond and used to be a
14 big slough in the area also. And so all the people
15 from the Edmonton construction, they came up here, and
16 that was when they rebuilt the -- the island for them.
17 And exactly right where the Simpson air
18 -- airport is located, all in the back area used to be
19 a slough area as well, so all that's been rebuilt as
20 well.
21 So now when you look at it, you
22 couldn't even really tell the difference what used to
23 be located there prior to the -- all the sloughing
24 there. So that's all I wanted to share with you.
25 Thank you. Masi.

(INTERPRETATION CONCLUDED)

THE CHAIRPERSON: Masi. Masi, Flora. Masi, Francis, for your comments.

Our next presentation is from Fisheries and Oceans Canada.

(BRIEF PAUSE)

PRESENTATION BY DEPARTMENT OF FISHERIES AND OCEANS:

MS. VERONIQUE D'AMOURS GAUTHIER: Good afternoon, Madam Chairperson, Board members, and members of the public. My name is Veronique D'Amours Gauthier. I am a senior fisheries protection biologist for the Fisheries Protection Program with the Department of Fisheries and Oceans Canada.

I'd also like to introduce Jessica Taylor on my side, fisheries protection biologist, also with the Department of Fisheries and Oceans Canada. We will be skipping over our mandates.

In regards to the high water mark, Fisheries and Oceans Canada recommends that the Developer submit a request for a review, or a Fisheries Act authorization application for this project. If they apply, we recommend that the

1 Developer utilizes the term provided in our Fisheries
2 Protection Policy statement, such as serious harm,
3 permanent alteration, and destruction of habitat.
4 In Fisheries and Oceans Canada final
5 technical report, recommendation number 4, we
6 recommended that hydrographs modelling and detailed
7 design for existing channel and the proposed channel
8 be submitted to us during the regulatory phase.
9 In response to our request, the
10 Developer said they expect to refine design and update
11 models, and that Fisheries and Oceans Canada does not
12 appear to be requesting additional -- or different
13 information at this time, but for the information to
14 be resubmitted during the regulatory phase, at which
15 time it will be reevaluated.
16 Fisheries and Oceans Canada does not
17 agree with the Developer's response to our request.
18 The information that has been submitted so far is not
19 sufficient for Fisheries and Oceans Canada to
20 determine the extent of the impact on fish and fish
21 habitat.
22 As for the second round of Information
23 Requests, DFO IRs number 5, Fisheries and Oceans
24 Canada will require further information during the
25 regulatory phase such as hydrograph modelling detail

1 design for Sundog Creek, florae information, baseline
2 studies, and post-diversion under flow scenario.
3 In regards to riparian vegetation, even
4 if the issue related to riparian vegetation has been
5 resolved, Fisheries and Oceans Canada recommend to the
6 Proponent regarding -- that they implement best
7 management practice.
8 For crossing, Fisheries and Oceans
9 Canada recommended in their technical report
10 supplement that the Developer include all impacts to
11 fish and fish habitat in table A1.9 that was submitted
12 on March 9, 2017. The Developer confirmed on April
13 24th that the Liard River barge crossing with a
14 permanent alteration is to meet at -- at 2,379 met --
15 square metres, that it will be added to the summary
16 table.
17 In Fisheries and Oceans Canada final
18 technical report recommendation number 11, we
19 recommended that the Devel -- Developer clarify which
20 return year was used to calculate impact to water
21 crossing.
22 In their response, the Developer stated
23 for crossing high water mark was conservatively
24 appropriated using the bank shape and presence of
25 vegetation, which is considered to be greater than the

1 1:2 year return period.

2 The Developer has confirmed that they

3 are using bankful width for the high water mark. The

4 return year at this time remain unclear. In the

5 Fisheries and Oceans Canada final technical report

6 recommendation number 11, we recommended that the

7 Developer incorporate a barrier to upstream fish

8 passage in their designs. The barrier will be located

9 upstream of the offsetting proposed. The Developer

10 confirmed on April 24th that step will be incorporated

11 in the design.

12 In Fisheries and Oceans Canada final

13 technical report recommendation number 12, we

14 recommended that the Developer consider the

15 possibility of a channel readjustment phase, and the

16 Developer plan to mitigate these potential adverse

17 effects. The Developer believes the low flow in the

18 relocated channel will function the same way as in the

19 -- the existing channel without a readjustment phase.

20 The Developer does not anticipate any

21 sort of adjustment period that will be detectable or

22 which will warrant a mitigation plan. Fisheries and

23 Oceans Canada maintained its recommendation regarding

24 this matter.

25 In Fisheries and Oceans Canada final

1 technical report recommendation number 13, we
2 recommended that the Developer design the new channel
3 to facilitate fish passage at both high and low -- low
4 flow for Arctic grayling, and any other species of
5 fish that may use Sundog Creek at all relevant life
6 stages. Such fish may have different capacities for
7 swimming performance, which may affect the design of
8 the new channel.
9 In their response, the Developer said
10 the new channel will provide the same capacity and
11 velocity, therefore there will be no change to fish
12 passage. Fish passage analysis are required to ensure
13 fish passage and avoid serious harm. These results
14 should be incorporated into the Sundog Creek channel
15 re -- design. Therefore, Fisheries and Oceans Canada
16 recommendation still stands.
17 For the dewatering and water
18 withdrawal, this issue was resolved as the Developer
19 has confirmed that they will not be dewatering in
20 Sundog Creek, and the term 'partial dewatering' used
21 in the March 9, 2017, Hatfield memo was in reference
22 to the base flow that will remain in the existing
23 channel post-realignment.
24 Fisheries and Oceans Canada would like
25 to say to the record that the first recommendation on

1 this slide is a typo, therefore should not be
2 considered. Fisheries and Oceans Canada technical
3 report supplement recommendation number 2, we
4 recommended that the Developer confirm that the water
5 withdrawal calculation, Table A1.7, on the March 9th
6 Hatfield memo referred the rate proposed which varied
7 between 1 and 5 percent.
8 However, values appear to be based
9 solely on 1 percent values provided in -- in August
10 11, 2016, Canadian Zinc operation letter to the
11 Mackenzie Valley Environmental Impact Review Board as
12 part of Undertaking number 9. On April 24th, the
13 Developer confirmed that this will be corrected.
14 In recommendation number 4 and 5,
15 Fisheries and Oceans Canada recommended that the
16 Developer install water level gauge at lakes to be
17 withdrawn from, and to provide updated information for
18 any species of fish that may use those lake at any
19 point in their life cycle. In response, the Developer
20 said that of the six (6) lakes in question, only one
21 (1) is confirmed fish bearing. The Developer stated
22 that all six (6) of the lakes are not likely to
23 support fish due to a variety of conditions.
24 Therefore, according to them the
25 installation of water level gauges is not necessary.

1 Lakes should be assumed fish bearing unless confirmed
2 otherwise. The province should do a baseline study to
3 determine if lakes are fish bearing or not. Fisheries
4 and Oceans Canada recommendation stands.
5 For blasting, Fisheries and Oceans
6 Canada recommendation for a lower threshold limit to
7 effectively mitigate against serious harm to fish and
8 fish habitat in the Northwest Territories still stand.
9 A side channel between kilometre 37.55
10 and 37.77 known to provide a depth for Arctic grayling
11 and slimy sculpin will be covered by the proposed road
12 present. The side channel provides rearing and
13 possible spawning habitat. Fisheries and Oceans
14 Canada recommends that the Devel -- Developer submit a
15 request for review or Fisheries Act Authorization
16 application.
17 The Developer provided preliminary
18 offsetting operation, including the construction over
19 -- overwintering pool, a low-grade inside channel, and
20 the Sundog Creek channel realignment.
21 Fisheries and Oceans Canada recommended
22 that the Developer continue working with Fisheries and
23 Oceans Canada and any indigenous impacted group to
24 identify suitable offsetting opportunities and for the
25 Developer to submit a request for review or apply for

a Fisheries Act Authorization so that the offsetting plan can be reviewed in more detail.

Thank you. Any questions?

QUESTION PERIOD:

THE CHAIRPERSON: Thank you for your presentation. Questions, Dehcho First Nations?

MS. CARRIE BRENEMAN: Carrie Breneman, Dehcho First Nations. I have a few questions around the fisheries authorization for the Sundog Creek realignment.

(BRIEF PAUSE)

MS. CARRIE BRENEMAN: On slide 9 you mentioned the proposed measures to avoid and mitigation serious harm to fish. Could you -- and you also mech -- rec -- or have in one (1) of your recommendations implementation of a water crossing maintenance and monitoring plan.

Do those types of watering -- or monitoring plans include direct monitoring of fish?

MS. VERONIQUE D'AMOURS GAUTHIER: Veronique, with Fisheries and Oceans Canada.

For the water crossing, it is important

1 that fish passage is not impeded. Therefore, the
2 proponent has to monitor to ensure that fish passage
3 is -- that fish can pass to any crossing. It is not
4 directly related to fish, but they have to demonstrate
5 that any fish at any time of their life cycle have the
6 ability to use the habitat, including any of the
7 construction for culvert or bridge or any structure
8 within the water body.
9 MS. CARRIE BRENEMAN: Carrie Breneman,
10 Dehcho First Nation. So does that monitoring include
11 direct monitoring of fish, not just that the culvert
12 or water course kind of has water in it and is clear?
13 MS. VERONIQUE D'AMOURS GAUTHIER: For
14 the crossing -- oh, sorry, Veronique D'Amours
15 Gauthier, with Fisheries and Oceans Canada.
16 For the crossing itself it could be
17 related directly to fish, but it can also not be
18 directly related as the fish might not be present at
19 the moment of the monitoring. But when doing the
20 monitoring the proponent will have to ensure that
21 there are no impediment to fish.
22 Therefore, that even if they cannot see
23 fish or that fish are not present at the moment, that
24 doesn't mean that the proponent doesn't have to ensure
25 that the passage is not available. So, therefore,

there has to be fish passage at any time during the year to allow for fish to migrate or use the habitat.

MS. CARRIE BRENEMAN: In the case of the Sundog Creek realignment, is it necessary for there to be -- because we were talking about water crossings and fis -- fish passage. But in the case of the Sundog Creek realignment and the issue around offsetting, is it necessary for the proponent to do monitoring of -- of fish directly in the new offset as an authorization under the Fisheries Act?

MS. VERONIQUE D'AMOURS GAUTHIER: Veronique D'Amours Gauthier, with Fisheries and Oceans Canada. For the Sundog diversion channel we anticipate that a Fisheries Act authorization will be issued and, therefore, offsetting will be required.

So for any offsetting proposal it is required that the proponent demonstrate that there is sustainability in the fisheries; therefore, that fish can use the habitat in a sustainable way, which means that they will have to monitor for fish.

MS. CARRIE BRENEMAN: Okay.

(BRIEF PAUSE)

MS. CARRIE BRENEMAN: On slide 12 you

1 talked about --

2 THE CHAIRPERSON: Please state your

3 name again for the record.

4 MS. CARRIE BRENEMAN: Okay. Sorry

5 about that. Carrie Breneman, Dehcho First Nations.

6 On side 12 for water withdrawal, you

7 mention two (2) points, and I just wanted to clarify.

8 You indicated that baseline work for Fisheries hasn't

9 been done for all of the lakes that they're proposing

10 to withdraw water from.

11 Is that correct?

12 MS. VERONIQUE D'AMOURS GAUTHIER:

13 Veronique D'Amours Gauthier, with Fisheries and Oceans

14 Canada. This is correct.

15 MS. CARRIE BRENEMAN: Carrie Breneman,

16 Dehcho First Nations.

17 And is it a requirement for them to do

18 fisheries work in all of those lakes that they're

19 requesting to draw water in to make sure that there's

20 no fish, or -- or to determine the presence of fish?

21 MS. VERONIQUE D'AMOURS GAUTHIER:

22 Veronique D'Amours Gauthier, with Fisheries and Oceans

23 Canada.

24 Like I mentioned during my

25 presentation, if there's no baseline data, we're just

1 going to assume that fish are present within any water
2 bodies.
3 MS. CARRIE BRENEMAN: Okay. Also in
4 the water withdrawal section, you indicate that you're
5 requesting Canadian Zinc to install water gauges.
6 What could be the outcome of installing these water
7 gauges? At what -- you know, like let's say you have
8 a lake that there's water withdrawal on. And after
9 five (5) or ten (10) years, you're noticing that the
10 lake has dropped and there's fish present in the lake.
11 What -- what type of mitigation would
12 be required or -- or what -- what would you be
13 requiring of Canadian Zinc in terms of adaptive
14 management?
15 MS. VERONIQUE D'AMOURS GAUTHIER:
16 Veronique D'Amours Gauthier, with Fisheries and Oceans
17 Canada. By monitoring the water level, we can
18 determine if there's impact to fish and fish habitat.
19 It is the Proponent's responsibility when there is
20 fish -- impact to fish and fish habitat to inform
21 Fisheries and Oceans Canada about it.
22 So if we see that there are going to be
23 impact to fish and fish habitat, the project will have
24 to be reassessed, and mitigation and monitoring
25 measures might be taken. That mean that -- an

1 example, they might have to go withdraw water from
2 another water bodies where we will know that the
3 impact are limited or non-present.
4 There's also way to analyze the fish
5 habitat to really determine the extent. So everything
6 will depend on the extent of the impact and what the
7 proponent will be proposing as monitoring and
8 mitigation measures.
9 MS. CARRIE BRENEMAN: Sorry. And just
10 to get back to another point, you said in cases where
11 baseline work on fisheries hasn't been complete, that
12 you'll assume that there's fish there.
13 We heard earlier from Canadian Zinc
14 that some of their fisheries were -- involved
15 helicopter use. Do you consider that to be adequate?
16 Like in -- in those cases where it's just visual and
17 they're assessing it from the air, are you assuming in
18 those cases that there's fish present?
19 MS. VERONIQUE D'AMOURS GAUTHIER:
20 Veronique, with Fisheries and Oceans Canada.
21 It will depend on the water body.
22 Sometime visual is enough to determine. Like if
23 there's too much turbidity in a water body or if
24 there's main -- barely any water on the water body,
25 that could be sufficient.

1 But in other circumstances, further
2 baseline study will be required. Therefore, depending
3 on the water body, we may or may not determine that it
4 is sufficient.
5 MS. CARRIE BRENEMAN: Carrie Breneman,
6 Dehcho First Nations. We don't have any other
7 questions. Thank you.
8 THE CHAIRPERSON: Questions,
9 Environment Can -- Environment and Climate Change
10 Canada?
11 MR. BRADLEY SUMMERFIELD: Thanks,
12 Madam Chair. Bradley Summerfield, with Environment
13 and Climate Change Canada. We don't have any
14 questions.
15 THE CHAIRPERSON: Questions,
16 Government of the Northwest Territories?
17 MS. LORRAINE SEALE: Lorraine Seale,
18 GNWT. No questions.
19 THE CHAIRPERSON: Questions,
20 Indigenous and Northern Affairs Canada?
21 MR. MIKE ROESCH: Mike Roesch, for
22 INAC. And we have no questions, thank you.
23 THE CHAIRPERSON: Questions, Liidlii
24 Kue First Nations?
25 MR. DEAN HOLMAN: Thank you. Thank

1 you, Madam Chair. I have -- I have one (1) question
2 or two (2) questions. Sorry. My name is Dean Holman
3 from Liidlii Kue First Nation.
4 I have two (2) questions and possibly
5 one (1) recommendation. My first question is:
6 Does DFO consider the Sundog Creek
7 realignment, including dredging the waterway to be a
8 serious adverse impact at fish and fish habitat?
9 MS. VERONIQUE D'AMOURS GAUTHIER:
10 Veronique, with Fisheries and Oceans Canada.
11 At the moment, we consider the impact
12 of the Sundog diversion a serious harm to fish,
13 therefore it is likely that a Fisheries Act
14 authorization will be required.
15 MR. DEAN HOLMAN: Again, Dean Holman,
16 from Liidlii Kue First Nation.
17 We want to recommend that D --
18 recommend to -- that DFO recommend to Canadian Zinc to
19 undertake to investigate potential invasive species on
20 riparian habitat within the project because project
21 equipment passes through areas along the travel route
22 to and from British Columbia where there are invasive
23 species occurring, and where there are warnings along
24 BC highways.
25 LKFN also sees this as -- as potential

1 serious adverse impact to the environment.

2 MS. VERONIQUE D'AMOURS GAUTHIER:

3 Veronique, with Fisheries and Oceans Canada.

4 During the regulatory phase for

5 Fisheries and Oceans Canada, we will keep this in

6 mind. And ask the proponent to provide further

7 information and more detail on this. Thank you.

8

9 (BRIEF PAUSE)

10

11 MR. DEAN HOLMAN: Thank you. Dean

12 Holman, from Liidlii Kue First Nation.

13 When the feth -- Fisheries

14 authorization process does occur, LKFN and the Dehcho

15 First Nation would like to be involved in that

16 process, as well as the monitoring aspect within that

17 process. Masi.

18 MS. VERONIQUE D'AMOURS GAUTHIER:

19 Veronique, with Fisheries and Oceans Canada.

20 Knowing that the Proponent isn't

21 submitting an official offsetting plan for this

22 project and haven't submitted the application, we know

23 that further information will be submitted during the

24 regulatory phase, so it is more than likely that we

25 will be consulting with impacted indigenous groups

1 during the regulatory phase.

2 MR. DEAN HOLMAN: Thank you. Dean

3 Holman, from LKFN. We have no more questions at this

4 time. Masi.

5 THE CHAIRPERSON: Questions, Nahanni

6 Butte Dene Band?

7 MS. JAYNE KONISENTA: It's not a

8 question, but I would like to comment on something.

9 Oh, sorry, Jayne Konisenta, Nahanni Butte.

10

11 (INTERPRETED FROM SOUTH SLAVEY LANGUAGE INTO ENGLISH)

12

13 MS. JAYNE KONISENTA: And so, they

14 were talking about how they wanted to pump up some

15 water and transfer into this area. In -- in the

16 wintertime there's a lot of snow and that melts into

17 water as well, so in June and July there is a lot of

18 water. And then during the summer we have a lot rain,

19 so there is a lot of water.

20 And then why are they saying because of

21 the water level is going to drop they want to go to

22 another lake and pump out the water, and so they can

23 use it. We're talking about in the mountains. In

24 June and July there's still a lot of snow in the

25 mountains. Even though if there is no water, that

1 snow is going to melt from the mountain and is going
2 to runoff of into the mountain into the bodies of
3 water in -- down in the lower lands.
4 So I'm just wondering why they're
5 asking -- talking about pumping the one (1) lake. So
6 when you look at it, usually snow melts and then it
7 comes over into the valley. So all summer long we get
8 rain and there's snow in the mountains, so there's a
9 lot of water out there. So we know for a fact because
10 we're out there all the time. Thank you.
11
12 (INTERPRETATION CONCLUDED)
13
14 MS. VERONIQUE D'AMOURS GAUTHIER:
15 Veronique, with Fisheries and Oceans Canada.
16 Would it be possible to direct the
17 question to Canadian Zinc since they are the one that
18 knows why they are proposing to dewater? Thank you.
19 THE CHAIRPERSON: Jayne, would you
20 like Canadian Zinc to answer that, or make a comment
21 in regards to that? We'll -- because Can Zinc is
22 coming down on the list here also, and they can answer
23 it at that time, or if you feel your -- Canadian Zinc,
24 you're able to answer it at this time, that's fine.
25 Jayne, that's fine?

1 MS. JAYNE KONISENTA: Excuse me,
2 Jayne.
3 This -- I believe I'm directing this to
4 the table where they're talking about to put water --
5 and when -- where the water level is low. I'm
6 commenting on that. This is not a question.
7 MS. VERONIQUE D'AMOURS GAUTHIER:
8 Veronique D'Amours Gauthier, with Fisheries and Oceans
9 Canada.
10 At the moment it might be a lot of
11 water, but it doesn't mean that in the future we
12 wouldn't have dry condition that wouldn't cause the
13 water bodies to reduce the level of water
14 considerably; that's why we would like for it to be
15 monitored.
16 MS. JAYNE KONISENTA: Masi.
17 THE CHAIRPERSON: Questions from
18 Natural Resources Canada?
19 MR. GARTH WALLBRIDGE: Excuse me,
20 Madam Chair.
21 THE CHAIRPERSON: Oh, sorry.
22 MR. GARTH WALLBRIDGE: Yeah. No,
23 that's fine.
24 THE CHAIRPERSON: Nahanni Butte, Dene
25 Band.

1 MR. GARTH WALLBRIDGE: Yeah, a -- a
2 question for DFO. In reply a moment -- oh, Garth
3 Wallbridge, sorry.
4 A few moments ago in reply to a
5 question from Liidlii Kue about the phraseology as
6 serious adverse impact, I understood DFO to say, Yes,
7 they would consider that that would be the case.
8 However, I want to confirm that based
9 on your presentation, DFO would presumably, and be
10 able to issue a -- and would only issue an
11 authorization if you're satisfied that there is a
12 mitigation strategy that's effective to your
13 standards.
14 Would that be fair?
15 MS. VERONIQUE D'AMOURS GAUTHIER:
16 Veronique D'Amours Gauthier, with Fisheries and Oceans
17 Canada. This is correct.
18 MR. GARTH WALLBRIDGE: Merci.
19 THE CHAIRPERSON: Okay. Questions
20 from Natural Resource Canada?
21 MS. VICTORIA THOMAS: Victoria Thomas,
22 with Natural Resources Canada. We have no questions.
23 THE CHAIRPERSON: Canadian Zinc, you
24 had a comment in order -- for the last question from
25 Mr. Wallbridge?

1 MR. DAVID HARPLEY: It's Dave Harpley.
2 Yeah, I just want to review that comment, because I'm
3 not -- I don't believe that's what Fisheries actually
4 said.
5 They didn't actually say that there
6 would be significant effect. They said that there is
7 potential for serious harm and, therefore, may require
8 an authorization, which I believe is different.
9 THE CHAIRPERSON: For clarification,
10 Fisheries?
11 MS. VERONIQUE D'AMOURS GAUTHIER:
12 Veronique D'Amours Gauthier, sorry, I interpreted it
13 as the same thing.
14 THE CHAIRPERSON: Okay. Questions
15 from Parks Canada?
16 MS. ALLISON STODDART: Allison
17 Stoddart, with Parks Canada. We have no questions.
18 THE CHAIRPERSON: Questions from
19 Canadian Zinc?
20 MR. DAVID HARPLEY: It's Dave Harpley.
21 Madam Chair, I'm wondering if we might defer ours
22 until after the break, because I do need to caucus
23 with my consultants?
24 THE CHAIRPERSON: Okay. We could come
25 back to you after lunch then. Questions from Board

1 staff?

2

3 (BRIEF PAUSE)

4

5 THE CHAIRPERSON: Okay. What we'll do

6 right now then, apparently the lunch is ready, so we

7 would like to break right now for lunch for one (1)

8 hour and come back at 1:14. And we will start with

9 Canadian Zinc.

10

11 --- Upon recessing at 12:13 p.m.

12 --- Upon resuming at 1:25 p.m.

13

14 THE CHAIRPERSON: All right. If we

15 could start. We're on the area of questions, and

16 Canadian Zinc, it's your questions.

17 MR. BILL ROZEBOOM: Bill Rozeboom,

18 Tetra Tech, for Canadian Zinc. I have what may be

19 more comments than questions, but I'd like to share

20 them with the Board, if I may.

21 Many of the points raised by DFO refer

22 to Sundog Creek and communications which we've had in

23 the process of the technical reports which were filed

24 in response to the second round of Information

25 Requests.

1 There are several of the Information
2 Requests to which I provided the response and which
3 now DFO is saying, Well, we recognize that there's --
4 there's a response, but we don't like it, so we're
5 going to ask for the same thing again.
6 And I just want to make the point that
7 we're -- we're trying to have a dialogue where we
8 advance the understanding of what's going on, what can
9 be usefully provided to understand and appreciate
10 what's going on.
11 And it's just not helpful if we're
12 repeating the same request over again without an
13 explanation of why the response we provided was not
14 sufficient. So that's the number 1 thing I want to
15 make -- number 1 point.
16 The second point is that -- in the
17 spirit of trying to have a common understanding of
18 what's going on, because I think if we all understand
19 the process, we can more or less agree on what the
20 impacts might be, we did have follow-up discussions.
21 Jessica Taylor, you know, prepared some notes for some
22 of these communications, and one (1) of the things
23 which I thought had been resolved during those
24 discussions was the question of a "re-adjustment
25 phase."

1 So when Sundog Creek switched over from
2 the existing channel to the new historical -- the new
3 channel, which was the historic channel, that that
4 transition will be more or less instantaneous. The
5 reason for that is the transition will occur during a
6 period where the entire system is dried up. There's
7 no water.
8 So when the system is rewetted from
9 runoff from the upper watershed, it'll rehydrate the
10 new channel as opposed to the old channel. But
11 functionally, there's no adjustment. So again, it's a
12 little bit disappointing for us to have gone through
13 this discussion and to find the same question
14 repeated.
15 I'll just address a couple of the other
16 points in the slides from DFO. One (1) is the --
17 their slide from page number 6 where they asked about
18 the high water mark definition, and they also asked
19 about using the same terms found in the DFO
20 authorizations.
21 We have actually done that. We have
22 been very diligent, I think, about identifying what
23 are the regulations, how do we follow them? In the
24 case of the high water mark, the DFO regulations that
25 we found talk about the "ordinary high water mark."

1 And in previous communications last year, John and I
2 collaborated, and he found the following definition
3 from a DFO operational statement, Fisheries and Oceans
4 Canada Nunavut Operational Statement, Version 3, and
5 it says:
6 "Ordinary high water mark,
7 abbreviated HWM: The usual or
8 average level to which a body of
9 water rises at its highest point and
10 remains for a sufficient time so as
11 to change the characteristic of the
12 land. In flowing waters, rivers and
13 streams, this refers to the active
14 slash -- active channel/bank-full
15 level, which is often the one (1) in
16 two (2) year flood flow return
17 level."
18 And I think that definition, ordinary
19 high water mark being an approximate -- being
20 approximately equal to the one (1) in two (2) year
21 flood level, also can address a question asked on
22 DFO's presentation, page 9, which asks:
23 "To clarify which return year was
24 used to calculate serious harm to
25 fish."

1 So we have done our best to identify
2 the DFO requirements, and to follow them. So what's
3 wrong with our interpretation of the -- of the DFO
4 requirements? That would be my question.
5
6 (BRIEF PAUSE)
7
8 THE CHAIRPERSON: Fisheries and
9 Oceans?
10 MS. VERONIQUE D'AMOURS GAUTHIER:
11 Thank you, Madam Chair. Veronique D'Amours Gauthier,
12 with Fisheries and Ocean.
13 For most of the information provided,
14 it's just that we are missing some information for the
15 hydrograph for Sundog Creek. We have the hydrograph
16 for Prairie Creek but not for Sundog, so there's still
17 some information that is needed on our behalf for the
18 readjustment.
19 It's not that we disagree with you,
20 it's just we still need to -- the data to support what
21 you are saying. For the high water mark, thank you
22 for clarifying that it's the one (1) and two (2)
23 years.
24 So the information provided during the
25 environmental assessment will be good and utilized

1 during the regulatory phase, it's just that during the
2 regulatory phase we might require further information.
3 MR. BILL ROZEBOOM: So on the
4 readjustment -- so I'm going to address the remaining
5 two (2) points separately. On the question of the
6 readjustment --
7 THE CHAIRPERSON: Please state your
8 name again?
9 MR. BILL ROZEBOOM: I'm -- I
10 apologize. Bill Rozeboom, Tetra Tech. On the
11 questions of readjustment, it's a matter of
12 understanding the process, recognizing that this
13 system is going dry and why it's going dry and in
14 acknowledgement that there's nothing to readjust to.
15 The -- the system recharges every year.
16 It recharges from the source of the water, which is
17 the active channel at the time. And then in the fall
18 the system drains, the system being all the water
19 that's stored in the -- the gravel next to the stream.
20 So there -- there just is no readjustment.
21 I don't know what data can be provided
22 to show otherwise. Can you describe for us
23 specifically what data you're looking for?
24 MS. VERONIQUE D'AMOURS GAUTHIER:
25 Veronique D'Amours Gauthier, with Fisheries and Oceans

1 Canada.

2 Would it be possible for Canadian Zinc

3 to provide further information on how long it stays

4 dry and when the creek actually start -- well, in the

5 spring up to when it begins to dry and what the

6 condition are right now?

7 MR. BILL ROZEBOOM: We have

8 information from the... Bill Rozeboom. We -- the

9 only good information we have on the actual

10 hydrographs in the area, which includes the drying up

11 period, are from the Pra -- Prairie Creek at the

12 Canadian Zinc mine, Cadillac Mine. That is the

13 nearest and most representative stream gauge. There

14 is nothing else that's close.

15 The reason -- or one (1) of the reasons

16 that the Prairie Creek system, unlike -- I'm sor --

17 the reason that Sundog goes dry whereas Prairie Creek

18 has year-round flows is that the Sundog Creek has this

19 immense alluvial deposit in -- in its broad

20 floodplain, so there -- there is abundant subsurface

21 storage for the water to -- to soak into and to

22 disappear.

23 We can look at the Prairie Creek record

24 and see when freshet starts every year. We have those

25 records. We can look at the historical air photos to

1 see typically when the reach dries up. It won't be
2 precise, be -- and it's going to be different from
3 year to year, but we can certainly bracket the period
4 of dryness.
5 MS. VERONIQUE D'AMOURS GAUTHIER:
6 Veronique D'Amours Gauthier, with Fisheries and
7 Oceans. Thank you. That will be appreciated.
8
9 (BRIEF PAUSE)
10
11 MR. BILL ROZEBOOM: Bill Rozeboom. On
12 the question of the hydrographs from Prairie Creek,
13 the only place we have actual hydrographs are where
14 Water Survey of Canada has provided stream gauges.
15 Prairie Creek is the best stream gauge to represent
16 the larger drainages or all the drainages in -- in the
17 -- the study area.
18 The -- the best way that we could
19 present a hydrograph if we wanted to attempt to do so
20 would be to scale the Prairie Creek hydrograph, but I
21 don't see any benefit in doing so. The actual
22 hydrographs just don't exist. We -- we can only -- if
23 a hydrograph was needed, and I -- and I don't see the
24 -- the use of it here, but if a hydrograph was needed,
25 we would look at the regional data and scale it to

1 come up with a representative hydrograph.
2 What we have done which is more useful
3 is to do the statistical analysis on the regional data
4 to come up with what would the two (2) year flow and
5 the hundred-year flow be and so forth.
6 So we have taken the regional data,
7 which is the best we have to work from, and we have
8 produced what we believe to be the appropriate
9 statistics to use in the engineering designs. Will --
10 will that be -- so we -- we have assumed that that
11 would be acceptable.
12 Would you accept that finding the
13 statistics, which are defensible, are -- are an
14 appropriate basis for designing this?
15
16 (BRIEF PAUSE)
17
18 MS. VERONIQUE D'AMOURS GAUTHIER:
19 Veronique D'Amours Gauthier, with Fisheries and
20 Oceans.
21 At the moment the hydrograph that was
22 presented, there's only one (1) and there's no
23 baseline data on the flow for that hydrograph. Would
24 it be possible to receive the information on this?
25 MR. BILL ROZEBOOM: Bill Rozeboom. No

1 -- no it's not simple. As everybody knows the flow in
2 streams go up and down, they're different from year to
3 year. So -- so to get a representative hydrograph
4 which actually captures all the variability on a
5 seasonal daily annual basis, you really have to have a
6 continuous gauge that runs for years.
7 That is simply not available for
8 Sundog. The best approach for Sundog is a regional
9 approach, which we have adopted, in my opinion. So --
10 so again, given -- given the absence of the necessary
11 data to do something more rigorous, would you agree
12 that what we have done using the recorded stream flow
13 data is appropriate?
14
15 (BRIEF PAUSE)
16
17 MS. VERONIQUE D'AMOURS GAUTHIER:
18 Veronique D'Amours Gauthier, Fisheries and Ocean's
19 Canada. We can keep going on and on.
20 I'm wondering if we can have a sidebar
21 discussion with Canadian Zinc and provide a summary to
22 the Board of our discussion?
23 THE CHAIRPERSON: Yes, that could be
24 done, but I would like to have legal counsel address
25 that issue, first.

1 MR. JOHN DONIHEE: Madam Chair, it's
2 John Donihee, for the Board. My suggestion is that we
3 accept an undertaking number 5 from the Department of
4 Fisheries and Oceans to come back with an answer to
5 that particular question after a -- a discussion with
6 Canadian Zinc.
7 And if -- if need be, then it could be
8 answered before the end of the hearing. But if the
9 parties need more time and our friends from DFO need
10 to talk to somebody in their -- elsewhere in their
11 system, then the answer could be provided by the date
12 when all undertakings are due.
13 THE CHAIRPERSON: Does that work for
14 both parties?
15 MR. BILL ROZEBOOM: Bill Rozeboom,
16 yes.
17 MS. VERONIQUE D'AMOURS GAUTHIER:
18 Veronique D'Amours Gauthier, Fisheries and Oceans
19 Canada, yes.
20
21 --- UNDERTAKING NO. 5: DFO and Can Zinc to
22 discuss hydrograph
23 modelling use for Sundog
24 Creek and submit a written
25 response based on these

1 discussions

2

3 THE CHAIRPERSON: Okay. Thank you.

4 Questions from Canadian Zinc?

5 MR. JOHN WILCOCKSON: Yes, John

6 Wilcockson, with Hatfield Consultants, Madam Chairman.

7 My question is regarding Sundog and potential for

8 serious harm to fish and serious impacts.

9 I should state that we recognize that

10 there is a process for assessing impacts to fish and

11 fish habitat. And we're fully aware that we're going

12 to need to submit an application for a Fisheries Act

13 authorization. We also recognize that there'll be

14 need for -- to mitigate any altered or -- or lost

15 habitat and to monitor any mitigation that we put in.

16 For the mitigation we have proposed --

17 we believe that the mitigation that we've proposed to

18 the Board during this EA process is sufficient and

19 appropriate. It includes a new habitat with similar

20 habitat to that that exists in the old channel.

21 We've also recommended putting in a --

22 an overwintering habitat for fish where overwintering

23 habitat is -- is truly limiting in the system. So we

24 believe that with these mitigation approaches in place

25 that there will be no serious harm to fish and fish

1 habitat.

2 And my question is: Do you agree?

3 MS. VERONIQUE D'AMOURS GAUTHIER:

4 Veronique, with Fisheries and Oceans Canada.

5 Our problem at the moment is you keep

6 referring to the word "mitigation" and not

7 "offsetting". Therefore, for us, we consider the

8 diversion channel as serious harm and will require

9 offsetting.

10 MR. DAVID HARPLEY: It's Dave Harpley.

11 So just to get to the point here on -- on why we're

12 belabouring this issue, you said earlier that you

13 consider serious harm and serious effect to be one and

14 the same.

15 And we have a problem with that because

16 to our way of thinking, serious harm means just that

17 there's a process that we have to go through to offset

18 habitat loss, and that, as a result of that process,

19 there will be no serious harm.

20 So it's my impression at least that,

21 given that that process will unfold successfully,

22 there's no basis to assume that there is significant

23 potential for effects at this stage, and it would be

24 wrong to mix the two (2).

25 Can you agree on that?

1 MS. VERONIQUE D'AMOURS GAUTHIER:
2 Veronique, with Fisheries and Oceans Canada. I'm not
3 sure I understand your question.
4 MR. DAVID HARPLEY: Dave Harpley. The
5 -- the problem is significant effects has a context in
6 terms of the EA and the decision. And we don't think
7 there is significant potential for effect --
8 significant effect, whereas you're equating that to
9 serious harm in your habitat management legal
10 framework, which is fine. We understand that, but I
11 don't -- I think that is separate from a determination
12 that there is significant potential for effects.
13 So that's where my concern is, and I'm
14 trying to separate the two (2).
15 MS. VERONIQUE D'AMOURS GAUTHIER:
16 Veronique, with Fisheries and Oceans Canada. In order
17 -- during the environmental assessment process,
18 Fisheries and Oceans Canada need to determine the
19 significant adverse effect of the project.
20 In doing so, DFO need to look at any
21 potential impact to fish and fish habitat and
22 determine serious harm to fish, which is why I
23 consider both during the environmental assessment as
24 being the same because we need to use our own
25 processes to make a determination on the significant

1 adverse effect.

2 So if there's offsetting and mitigation

3 and avoidance measure in place, then I agree that the

4 significant adverse effects should be resolved.

5 MR. DAVID HARPLEY: Dave Harpley.

6 Okay. So now -- so then if we agree that we do need

7 to offset, and I think we do need -- we do -- we do

8 agree that we need -- do need to offset, and we've

9 provided a draft offset plan which appears to be

10 feasible and appears to be suitable for the location,

11 it does appear then that we are going to be able to

12 offset the serious harm and there will be no

13 significant effect.

14 Is that correct?

15 MS. VERONIQUE D'AMOURS GAUTHIER:

16 Veronique, with Fisheries and Oceans Canada.

17 Depending on the official application,

18 we will determine the extent of serious harm for our

19 own processes. But for the environmental assessment

20 phase, we have enough information to know that

21 Canadian Zinc will be able to mitigate, avoid, and

22 offset the serious harm.

23 MR. DAVID HARPLEY: Dave Harpley. So

24 then I'm going to take that personally as an

25 acceptance that there is likely not to be significant

1 effect then.

2 MS. VERONIQUE D'AMOURS GAUTHIER:

3 Veronique, with Fisheries and Oceans Canada.

4 For the environmental assessment, they

5 are looking at adverse. So there is significant

6 effect of the project, but considering the avoidance,

7 mitigation, and offsetting measures, I do believe that

8 the effect can be resolved.

9 THE CHAIRPERSON: Questions from

10 Canadian Zinc?

11 Questions from Review Board?

12 MS. KATE MANSFIELD: Thank you, Madam

13 Chair. This is Kate Mansfield, with the Review Board.

14 My question is in regards to the possibility of a

15 channel readjustment phase.

16 DFO has indicated that, despite some of

17 the evidence provided by Can Zinc about why they

18 believe the likelihood and potential consequences of a

19 channel readjustment phase to be low. That they still

20 would like the possibility of this channel

21 readjustment phase to be considered and monitored.

22 Can DFO please describe what potential effects you are

23 concerned about specifically, with the channel

24 readjustment phase?

25

1 (BRIEF PAUSE)

2

3 MS. VERONIQUE D'AMOURS GAUTHIER:

4 Veronique, with Fisheries and Oceans Canada.

5 Canadian Zinc have committed to provide

6 us with the missing information, which is when the

7 channels start being dry.

8 MS. KATE MANSFIELD: This is Kate

9 Mansfield, with the Review Board.

10 So are there any specific fish or fish

11 habitat ecosystem components that you are specifically

12 concerned about that need to be addressed, or you're

13 just looking for information to quantify the

14 likelihood and potential length of a channel

15 readjustment phase?

16

17 (BRIEF PAUSE)

18

19 MS. VERONIQUE D'AMOURS GAUTHIER:

20 Veronique D'Amours Gauthier, with Fisheries and Oceans

21 Canada.

22 What we really want to know is how long

23 the creek can be used as fish and fish habitat. So if

24 it goes dry, we want to know when it goes dry so we

25 know that there's no habitat for fish if there's no

1 water. So we just have a -- we just want to have an
2 understanding of the duration that the creek can be
3 used for fish.
4 MS. KATE MANSFIELD: Thank you.
5 That's my question. This was Kate Mansfield.
6 THE CHAIRPERSON: Legal counsel?
7 MR. JOHN DONIHEE: Thank -- thank you,
8 Madam Chair. It's John Donihee.
9
10 (BRIEF PAUSE)
11
12 MR. JOHN DONIHEE: Before lunch, Mr.
13 Holman asked a question and our friends from Canadian
14 Zinc have -- have just come back to it, and it has to
15 do with the relationship between the analysis
16 conducted by Fisheries and Oceans Canada of the DAR,
17 and in the context of the Board's process, and the
18 regulatory role that Fisheries and Oceans plays on its
19 own pursuant to the Fisheries Act.
20 And I -- I want to -- at the risk of
21 muddying things a little bit, I want to just explore
22 that for a few moments with you. And -- and what I'm
23 interested in is the way that the materials that you
24 filed, the technical report and the hearings -- the
25 PowerPoint here, the way that those materials relate

1 to the Board's mandate which, as Mr. Harpley pointed
2 out, is really all about trying determine -- trying to
3 determine whether at the end of the day there is going
4 to be a significant adverse impact on the environment.
5 And -- and in this case when I say
6 "environment" I'm only interested in the matters
7 within your department's mandate. So that -- that's
8 the -- the scope of -- of my concern, and -- an
9 outline of where I'm going to go.
10 The first thing I want to confirm is
11 that for Section 35 of the Fisheries Act to apply,
12 there needs to be a commercial, recreational, or
13 Aboriginal fishery, and I -- is it fair for us to
14 assume that from the standpoint of DFO that you're
15 assuming that this is a case where there is an
16 Aboriginal fishery in relation to these streams that
17 are going to be affected by this project?
18 MS. VERONIQUE D'AMOURS GAUTHIER:
19 Veronique, with Fisheries and Oceans Canada.
20 Because there's Arctic grayling present
21 in most of the water bodies and other species that are
22 present in the fishing guidelines for the Northwest
23 Territories, we assume that the fish are considered
24 commercial, recreational, and Aboriginal fisheries.
25 MR. JOHN DONIHEE: John Donihee.

1 Thank you. I'm -- I'm -- the definition of serious
2 harm to fish, if you'll accept my word for it, I wrote
3 it out of the Fisheries Act, you can -- you can
4 certainly check this later, but I promise I'm not
5 misleading you. The definition is:
6 "The death of fish or any permanent
7 alteration to or destruction of fish
8 or fish habitat."
9 And so again, in -- in relation to what
10 is being dealt with with Sundog Creek, I take it that
11 you -- your mandate could be triggered either by death
12 of fish resulting from those changes, or alteration or
13 disturb -- disturbance -- sorry, alteration or
14 destruction to fish habitat.
15 Is that fair?
16 MS. VERONIQUE D'AMOURS GAUTHIER:
17 Veronique, with Fisheries and Oceans Canada. This is
18 correct.
19 MR. JOHN DONIHEE: John Donihee.
20 Thank you. Now, in section 111 of the Mackenzie
21 Valley Resource Management Act. there's a definition
22 of impact on the environment, and I'll -- I'll quote
23 that to you, as well, subject to check. It means:
24 "Any effect on land, water, air, or
25 any other component of the

1 environment, as well as on wildlife
2 harvesting, and includes any effect
3 on the social/cultural environment -
4 - social or -- and cultural
5 environment. or on heritage
6 resources."
7 So I -- again, the definition of
8 "environment" in the Act is very broad. And your --
9 I'll -- I'll assume that -- for these purposes, that
10 you'll agree that an impact on the environment could
11 include an impact on fish or fish habitat.
12 Is that correct?
13 MS. VERONIQUE D'AMOURS GAUTHIER:
14 Veronique, with Fisheries and Oceans Canada. This is
15 correct.
16 MR. JOHN DONIHEE: Thank you again.
17 John Donihee. In this case, your minister for
18 Fisheries and Oceans Canada has a regulatory role.
19 We've already heard about that. And again, my
20 understanding is that you're here because your
21 minister is also a responsible minister under the
22 MBRMA for purposes of the government decision-making
23 on the report of EA.
24 So in -- in saying that, what I'm --
25 I'm suggesting is that your minister will play a role

1 in reviewing the report of environmental assessment
2 written by the Review Board at least insofar as that
3 affects the jurisdiction or mandate of the Department
4 of Fisheries and Oceans.
5 Is that fair?
6 MS. VERONIQUE D'AMOURS GAUTHIER:
7 Veronique, with Fisheries and Oceans Canada. This is
8 correct.
9 MR. JOHN DONIHEE: Thank you. John
10 Donihee. Just one (1) -- one (1) thing I'd like you
11 to clarify for me. I was reviewing the submission
12 that we're going to hear shortly from our friends at
13 Parks Canada, and they were -- they were saying some -
14 - some fishy things.
15 And I'm -- I'm kind of interested to
16 know, I can -- I apologize, I should know, but inside
17 the national park, is it the -- still the Department
18 of Fisheries and Oceans's responsibility to deal with
19 serious harm to fish and damage and destruction to
20 fish habitat?
21 Is that still your role or -- or within
22 the park, is that Parks Canada's role in the way they
23 seem to take over wildlife -- other wildlife
24 responsibilities?
25 MS. VERONIQUE D'AMOURS GAUTHIER:

1 Veronique, with Fisheries and Oceans Canada.
2 It is Fisheries and Oceans Canada's
3 role to issue Fisheries Act Authorization within the
4 park, but we work closely in collaboration with Park
5 Canada Agency.
6 MR. JOHN DONIHEE: Thank you for that
7 answer. What I want to do just quickly is to look at
8 the recommendations that were included in your
9 PowerPoint. And I -- I won't go any faster than you
10 feel comfortable with, but I'm not going to ask you
11 more than a single question about each of them.
12 And that is, when I look at the first
13 two (2) -- I'm beginning on page 6 here -- they both
14 deal with your Fisheries Act Authorization and the
15 terminology associated with that. So this -- these
16 two (2) recommendations are about your regulatory
17 mandate.
18 Is that -- is that correct?
19 MS. VERONIQUE D'AMOURS GAUTHIER:
20 Fisheries and Oceans Canada, Veronique, speaking.
21 Yes, this is correct.
22 MR. JOHN DONIHEE: And, slide 7, John
23 Donihee, again. A request for review that relates to
24 the authorization, additional information related to
25 hydrographs and modelling, in -- incorporate

1 principles of channel design.

2 These are, again, as I read them, about

3 the process -- the information that you need for your

4 authorization and the process of getting that

5 regulatory instrument taken care of.

6 Is that fair?

7 MS. VERONIQUE D'AMOURS GAUTHIER:

8 Veronique D'Amours Gauthier, with Fisheries and Oceans

9 Canada, yes.

10 MR. JOHN DONIHEE: And in respect of

11 riparian -- John Donihee. In respect of riparian

12 vegetation, as I read this, I -- I concluded you were

13 concerned that below the ordinary high water mark

14 could potentially, at least at some point in the year,

15 be Fisheries habitat. So these are again, matters

16 related to your regulatory authority.

17 Is that fair?

18 MS. VERONIQUE D'AMOURS GAUTHIER:

19 Veronique D'Amours Gauthier, with Fisheries and Oceans

20 Canada. In this case, it can be also considered for

21 the environmental assessment.

22 MR. JOHN DONIHEE: And moving onto

23 slide 9, again, recommendation 1 about serious harm to

24 fish, and, you know, the Developer to provide detailed

25 plans on water crossings, recommendation 4, serious

1 harm to fish. This is, again, primarily about your
2 concerns under the Fisheries Act, or -- or is it about
3 environmental impacts?
4 MS. VERONIQUE D'AMOURS GAUTHIER:
5 Veronique D'Amours Gauthier, with Fisheries and Oceans
6 Canada.
7 Again, in this case, we considered that
8 these recommendation are important in order to avoid
9 the impact of the project, so it can be considered in
10 the environmental assessment, and not only during the
11 regulatory phase.
12 MR. JOHN DONIHEE: Okay. Thank you.
13 John Donihee. I -- I won't go through the rest of
14 them. I did review your technical report, the
15 recommendations there as well. I -- I think that what
16 you could help the Board with, let me try to express
17 the -- the question this way:
18 We're -- you know, our Board is going
19 to have to sort of tease out those elements of your
20 recommendations, and there are quite a series of them
21 here, that deal with impact -- adverse impacts if you
22 will, or adverse effects impacts on the environment
23 from those that really are just designed to ensure
24 that you have what you need to take care of the other
25 side of your Minister's responsibilities, and that's

1 the regulatory process.

2 So how would you suggest that, you

3 know, the Board can make that distinction?

4 MS. VERONIQUE D'AMOURS GAUTHIER:

5 Veronique D'Amours Gauthier, with Fisheries and Oceans

6 Canada.

7 We think take as an undertaking to

8 provide more clarification about recommendations

9 directly related to the environmental assessment to

10 the Board.

11 MR. JOHN DONIHEE: Thank you. John

12 Donihee. At this point, I don't want to get into

13 trouble with our friends from Canadian Zinc. If -- if

14 you could simply identify which ones -- which of the

15 recommendations you've made you consider to be

16 addressing envi -- adverse effects on the environment

17 without changing them.

18 Just tell us. I mean, I -- you don't

19 have to do it right now. You can do it through the

20 undertaking, but -- but do that in a way we can know

21 which ones are about environmental impact assessment

22 and distinguish them from the ones that are about the

23 Fisheries Act and reg -- regulatory matters.

24 That would be quite helpful. And if --

25 Madam Chair, perhaps we could identify that as

1 undertaking number 5 -- 6. So it -- it -- will you
2 undertake to do that for us? I -- and -- and if you
3 do, I'd like you to go through your hearing
4 presentation as well as your -- your technical report
5 and do that.
6 MS. VERONIQUE D'AMOURS GAUTHIER:
7 Veronique D'Amours Gauthier, with Fisheries and Oceans
8 Canada. We will provide a response to undertaking
9 number 6.
10
11 --- UNDERTAKING NO. 6: DFO to identify which
12 recommendations address
13 impacts to the environment
14 and distinguish them from
15 those recommendations
16 related to regulatory.
17 For recommendations
18 related to environmental
19 assessment, describe which
20 impacts those
21 recommendations are
22 addressing
23
24 MR. JOHN DONIHEE: Thank you. John
25 Donihee. Mr. Cliffe -- Cliffe-Phillips' suggestion, I

1 -- I think is a -- I should add to the undertaking, so
2 I apologize for coming back to it. Where you do
3 identify recommendations that relate to environmental
4 impact assessment, I hope that you could also be -- if
5 you feel that you can help us understand exactly what
6 the impacts are that those recommendations are
7 addressing.
8 And -- and those impacts have to be in
9 your -- from your technical report. I don't want any
10 new evidence to result, but could -- could you do that
11 for us as part of that undertaking?
12 MS. VERONIQUE D'AMOURS GAUTHIER:
13 Veronique D'Amours Gauthier, with Fisheries and Oceans
14 Canada.
15 We don't have any issue with providing
16 a response to the addition of Undertaking number 6.
17 MR. JOHN DONIHEE: Madam Chair, it's
18 John Donihee. Thank you -- thank you very much.
19 That's -- that's most helpful.
20 I -- I think I can wrap up here then.
21 I -- I guess the -- there's sort of the big question
22 that we need to get to, and there -- there are a
23 couple of ways to pose it, the -- the -- but let me
24 try this way.
25 Clearly, Fisheries and Oceans -- and I

1 -- I'm reflecting on the exchange you had with Mr.
2 Harpley. Clearly, Fisheries and Oceans has a
3 regulatory role. Your job is to make sure that
4 serious harm to fish or destruction of habitat either
5 does not happen or that there are offsets that result
6 in order to keep things -- the amount of fish and
7 habitat equal.
8 So is that a fair -- fair way to kind
9 of describe that? I don't want to go beyond that if
10 you don't agree with me.
11 MS. VERONIQUE D'AMOURS GAUTHIER:
12 Veronique D'Amours Gauthier, with Fisheries and Oceans
13 Canada. I'm not sure I understand your statement.
14 MR. JOHN DONIHEE: Sure. John
15 Donihee. I'll try again. The -- the purpose of
16 section 35 of the Fisheries Act is to prevent serious
17 harm to fish or alteration or destruction of habitat.
18 And I -- I -- what I'm asking is: When
19 you go through the process of issuing an authorization
20 under the Fisheries Act, you presumably mitigate to
21 the extent that you can to prevent death of fish or
22 loss of habitat, or you have the option of ensuring
23 that by way of offsets, that there's as much habitat
24 or potential for fish after the offsets are in place
25 as there was before the spot where the authorization

1 was needed -- was changed.

2 Is -- is that fair?

3 MS. VERONIQUE D'AMOURS GAUTHIER:

4 Veronique D'Amours Gauthier, with Fisheries and Oceans

5 Canada. Yes.

6 MR. JOHN DONIHEE: Okay. John

7 Donihee. Then assuming that your -- your department's

8 regulatory role has been satisfied, and to the extent

9 that you need to issue authorizations and take care of

10 your mandate, the -- the question I have for you is

11 whether, in the opinion of the Department of Fisheries

12 and Oceans, there will be any residual, significant

13 adverse impacts on fish or fish habitat resulting from

14 this project.

15 MS. VERONIQUE D'AMOURS GAUTHIER:

16 Veronique D'Amours Gauthier, with Fisheries and Oceans

17 Canada.

18 With the Canadian Zinc commitment, I

19 don't think there will be any adverse effect of this

20 project on fish and fish habitat.

21 MR. JOHN DONIHEE: It's John Donihee.

22 Thank you, Madam Chair. Thank you, witness, for the -

23 - the answers. Those -- those are all my questions.

24 THE CHAIRPERSON: Okay. Thank you.

25 Questions from Board members?

1 David...?

2 MR. DAVID KRUTKO: David Krutko. I'd

3 just like to -- more of a process question in regards

4 to your fishing authorization.

5 When do you apply for it and when do

6 you get it? I'm just trying to get an idea of the

7 process they have to go through for a developer who

8 wants to develop, needs a Fishery authorization

9 authority by way of a licence.

10 So what steps do you have to take to

11 get there?

12 MS. VERONIQUE D'AMOURS GAUTHIER:

13 Veronique D'Amours Gauthier, with Fisheries and Oceans

14 Canada.

15 If ever the Board was to approve this

16 project, Fisheries and Oceans Canada can receive a

17 submission from Canadian Zinc any time after the

18 approval of the Board if ever they think it should be

19 approved, and from the approval of the minister.

20 Once the submission has been received

21 from Fisheries and Oceans Canada, we have a -- what we

22 call a clock. So we have ninety (90) days to submit a

23 response or to issue a Fisheries authorization to the

24 Proponent. The clock can stop at any time if we deem

25 that the information provided is not adequate, if we

1 think that further consultation need to occur.
2 So there's other element that can limit
3 the issuance of the authorization within the ninety
4 (90) day period, but in general, that ninety (90) days
5 is respected.
6 MR. DAVID KRUTKO: David Krutko.
7 So once you basically go through that
8 process, will you attach conditions in regards to
9 dealing with the habitat access? So what type of
10 conditions will you apply to that licence using this
11 presentation as the scenario that we're looking at?
12 MS. VERONIQUE D'AMOURS GAUTHIER:
13 Veronique D'Amours Gauthier, with Fisheries and Oceans
14 Canada.
15 The condition that will be within the
16 Fisheries authorization could be condition related to
17 the construction of the diversion channel. It could
18 have anything with -- I'm not saying that is the case,
19 I'm just giving example.
20 If the water withdrawal have an impact
21 on fish or fish habitat, we can have a condition
22 related to water withdrawal. We'll have condition
23 relating to offsetting, the monitoring of the project.
24 Those are example of condition that can be found
25 within the Fisheries authorization.

1 MR. DAVID KRUTKO: Okay. Thank you.
2 THE CHAIRPERSON: Questions from Board
3 members? Sunny...?
4 MS. SUNNY MUNROE: Sunny Munroe, Board
5 member.
6 I just want to go back to Mr. -- one
7 (1) of Mr. Donihee's questions. In fact, his last
8 one. There doesn't seem to be a temporal point in
9 that question. He asked you if...
10
11 (BRIEF PAUSE)
12
13 MS. SUNNY MUNROE: There seems to be a
14 temporal element missing in Mr. Donihee's last
15 question. He asked you if DFO would consider there
16 would be residual impacts on fish and fish habitat.
17 Is that for the life of the project?
18 Because your answer was you don't think there will be.
19 So is that for the life of the project, for the
20 duration of the -- the realignment of Sundog Creek, or
21 could you clarify that for me, please?
22 MS. VERONIQUE D'AMOURS GAUTHIER:
23 Veronique D'Amours Gauthier, with Fisheries and Oceans
24 Canada.
25 It will be for the life of the project.

1 THE CHAIRPERSON: Questions from Board
2 members?
3
4 (BRIEF PAUSE)
5
6 THE CHAIRPERSON: Thank you for your
7 presentation.
8 MS. VERONIQUE D'AMOURS GAUTHIER:
9 Thank you, Madam Chair, for your time.
10
11 (BRIEF PAUSE)
12
13 THE CHAIRPERSON: Our next
14 presentation is going to be from Parks Canada.
15
16 (BRIEF PAUSE)
17
18 THE CHAIRPERSON: Could we just have a
19 two (2) minute break, so try not everybody to leave.
20 We just need to have a two (2) minute break, and we'll
21 get right into the presentation.
22
23 --- Upon recessing at 2:11 p.m.
24 --- Upon resuming at 2:15 p.m.
25

1 THE CHAIRPERSON: Parks Canada, would
2 you like to start your presentation?
3
4 PRESENTATION BY PARKS CANADA:
5 MS. ALLISON STODDART: Thank you,
6 Madam Chair. Allison Stoddart, with Parks Canada.
7 So today we will be presenting on fish
8 and aquatic habitat, water quality and quantity, the
9 Sundog Creek alignment, as well as vegetation.
10
11 (BRIEF PAUSE)
12
13 MS. ALLISON STODDART: To start, Parks
14 Canada has indicated that the area within Sundog Creek
15 between kilometre 25 and 32 has the potential for
16 resident -- for resident population of Arctic
17 grayling, which was discussed earlier this morning.
18 The area in question has groundwater
19 flow which could potentially support grayling
20 throughout the winter. As a result, within our
21 technical report, Parks Canada has recommended that
22 Canadian Zinc -- Zinc include mitigations to Arctic
23 grayling during construction of kilometre 25 to 32 of
24 the proposed all-season road.
25 Parks Canada is pleased to see that

1 Canadian Zinc will be implementing this, including
2 mitigations for impacts to Arctic grayling.
3
4 (BRIEF PAUSE)
5
6 MS. ALLISON STODDART: Canadian Zinc
7 has stated that the south channel of Sundog Creek at
8 the proposed realignment is capable of withstanding a
9 one hundred (100) year flood within the main channel
10 without overtopping the existing channel. The design
11 was prepared based on a basin extrapolation of
12 regional peak flows data.
13 To reduce the risk that the channel be
14 not be capable of withstanding this level of flood,
15 Parks Canada recommended that Canadian Zinc provide at
16 least one (1) supplementary hydrotechnical calculation
17 based on existing information for Sundog Creek as a
18 check to support or correct the hydraulic model
19 utilized for Sundog Creek.
20 Canadian Zinc has indicated that a
21 single best method is used in situations where
22 potential alternative methods cannot be relied upon to
23 provide a useful check, such as when required
24 information is not available or simple methods are
25 inappropriate for large basin sizes.

1 Canadian Zinc has also committed that
2 hydraulic modelling of the Sundog Creek realignment
3 will be refined during detailed design, considering
4 the hydraulic model results for the preliminary design
5 as well as comments by other, and updated hydraulic
6 model results will be provided. Parks Canada is in
7 agreement with Canadian Zinc on this approach.
8 The proposed all-season road will
9 require dust control measures involving the withdrawal
10 of water from local water bodies. Water withdrawal
11 has the potential to impact water levels, which could
12 result in effects to the aquatic ecosystem, the
13 riparian zone, and species that depend on it.
14 While Parks Canada agrees with Canadian
15 Zinc that annual extraction volumes are unlikely to
16 have a significant impact, this is dependent on the
17 assumption that lakes will recharge to a suitable
18 level annually to ensure there are no significant
19 cumulative impacts over a number of years with annual
20 withdrawals.
21 Canadian Zinc has not provided any data
22 on recharge rates for the lakes in question. To add
23 to this uncertainty, future years may be complicated
24 by climate change which not only will impact
25 precipitation and evaporation rates, there's also the

1 potential impacts to other hydrological processes with
2 warming of the permafrost.
3 Parks Canada continues to recommend
4 that a precautionary approach be taken with the
5 installation of water gauges. This would allow the
6 proponent to monitor lake levels with regards to
7 predetermined lake level thresholds. Results from
8 this monitoring could then feed into an adaptive
9 management approach.
10
11 (BRIEF PAUSE)
12
13 MS. ALLISON STODDART: There's the
14 potential for reductions in water quality where the
15 project is in proximity to water bodies. In Parks
16 Canada's technical report, we recommended the
17 development of both a short and long-term surface
18 water quality monitoring program, including some of
19 the details that we would expect in that program.
20 Parks Canada is very pleased to see
21 that Canadian Zinc has committed to monitoring water
22 quality through both long-term and short-term
23 monitoring programs. The exact details of the
24 programs can be determined at the permitting phase.
25 Parks Canada only provided those details to inform

1 Canadian Zinc of the types of details that we would be
2 looking for in the program.
3 Parks Canada also recommended that
4 Canadian Zinc undertake a comprehensive baseline of
5 turbidity measurements at all road crossings -- at all
6 road crossing sites, the Sundog Creek realignment, and
7 at all water bodies, for example, lakes and wetlands
8 located adjacent to the road.
9 The purpose of this is to create a
10 linear regression model of the TSS turbidity
11 relationship that may serve as a surrogate measure of
12 TSS. Parks Canada recognizes that there are
13 logistical and upfront cost challenges to collect this
14 data.
15 However, we believe that this is
16 outweighed by the long-term benefits of this baseline
17 information. With the TSS turbidity relationship
18 established, this will enable infield measurements of
19 TSS, which will result in much faster mitigation
20 implementation rather than the significant delays that
21 would result from lab testing required for direct TSS
22 analysis.
23 In response to this recommendation,
24 Canadian Zinc has suggested that they use
25 representative streams to develop this baseline, and

1 Parks Canada agrees with this approach.
2 With regards to Sundog Creek and long-
3 term monitoring, the Proponent states that the real --
4 the realigned Sundog Creek should not require long-
5 term monitoring for water qualify, since after the
6 initial short-term adjustment period, realignment
7 behaviour will be natural, and the same as other parts
8 of the creek. Parks Canada continues to recommend
9 that long-term monitoring of Sundog Creek is required.
10 The Proponent assumes the system will
11 behave the same as other parts of the creek, but
12 without any followup monitoring, they will not know if
13 this assumption is correct. Parks Canada believes
14 that the realignment of the creek is a significant
15 undertaking and should have a long-term water qual --
16 quality monitoring program developed, designed to
17 detect potential water quality impacts, and then
18 adaptive management.
19
20 (BRIEF PAUSE)
21
22 MS. ALLISON STODDART: A portion of
23 Sundog Creek will be realigned to facilitate
24 construction of the proposed all-season road.
25 Rerouting and training of the stream channel in Sundog

1 Creek will impact the composition and abundance of
2 benthic macro invertebrate community, which is
3 essentially the insect community within the stream.
4 Until this stream channel is fully able
5 to colonize the quality of habitat for fish and other
6 taxa in this area that forage on these organisms will
7 be reduced. Recovery of the benthic macro
8 invertebrate community composition in the realigned
9 section of Sundog Creek to a condition reflecting the
10 upstream non-disturbed area may take multiple years.
11 Benthic communities are a key link in
12 the energy transfer in these systems. And although
13 the Proponent has indicated that this system is
14 oligotrophic, it does not make this link any less
15 important. Parks Canada has recommended that Canadian
16 Zinc develop a program to monitor the duration of
17 reductions in the ecological performance of the
18 realigned section of Sundog Creek using benthic macro
19 invertebrates as a biological indicator. This would
20 include an adaptive management plan to address any
21 adverse effects.
22 Parks Canada has outlined, in our
23 technical report, that gaps remain in the current
24 baseline for vegetation. And without this
25 information, it is difficult to assess the potential

environmental impacts of the proposed project.

Due to the rare terrain, such as karst and glacial refugia in the project area, there's a higher potential for rare, valued, and protected plants. As a result, there's a need to conduct fine-scaled field assessments in representative habitats and high-priority areas for rare, valued, and protected plants.

Parks Canada appreciates that Canadian Zinc has recognized that there are baseline gaps and has committed to performing those studies. This is captured in commitment 147, which indicates an early season rare plant survey prior to construction and the development of a rare plant management plan.

That concludes our presentation for today. Thank you very much.

QUESTION PERIOD:

THE CHAIRPERSON: Okay. Thank you. Questions to the presentation, Dehcho First Nations?

MS. CARRIE BRENEMAN: Carrie Breneman, Dehcho First Nations. I'm just curious about the proposed monitoring you have for benthic invertebrates and what that would look like.

1 (BRIEF PAUSE)

2

3 MR. CAVAN HARPUR: Madam Chair, Cavan

4 Harpur, Parks Canada.

5 With respect to the benthic monitoring

6 program, what we were looking for is using a reference

7 condition approach which would have several sites

8 upstream to act as reference sites to the downstream,

9 and as well as sites in the realigned creek to assess

10 the impacts on the benthic community. We'd be

11 following a CABIN protocol.

12 Also the duration or length of the

13 program would depend on how -- it would depend on the

14 data -- or the results. If -- you know, if all the

15 assumptions that Canadian Zinc has presented on quick

16 recovery are true, then -- are found to be correct,

17 then it can be -- and they can show that the sites

18 have -- have recovered, it can be terminated after a

19 year.

20 MS. CARRIE BRENEMAN: Carrie Breneman,

21 Dehcho First Nations. We have no further questions.

22 THE CHAIRPERSON: Questions,

23 Environment and Climate Change Canada?

24 MR. BRADLEY SUMMERFIELD: Bradley

25 Summerfield, with Environment and Climate Change

1 Canada. We have no questions.
2 THE CHAIRPERSON: Questions, Fisheries
3 and Oceans Canada?
4 MS. JESSICA TAYLOR: Jessica Taylor,
5 with Fisheries and Oceans Canada. We have no
6 questions, thank you.
7 THE CHAIRPERSON: Questions,
8 Government of the Northwest territories?
9 MS. LORRAINE SEALE: Lorraine Seale,
10 GNWT. We have no questions.
11 THE CHAIRPERSON: Questions,
12 Indigenous and Northern Affairs Canada?
13 MR. MIKE ROESCH: Mike Roesch, for
14 INAC. We have no questions, thank you.
15 THE CHAIRPERSON: Questions, Liidlii
16 Kue First Nations?
17 MR. DEAN HOLMAN: Thank you, Madam
18 Chair. Dean Holman, from Liidlii Kue. We have no
19 questions at this time, however do support the
20 recommendations that Parks Canada has put forth to us.
21 THE CHAIRPERSON: Questions, Nahanni
22 Butte Dene Band?
23 MS. JAYNE KONISENTA: This is not a
24 question, but I would like to comment something.
25

1 (INTERPRETED FROM SOUTH SLAVEY LANGUAGE INTO ENGLISH)

2

3 MS. JAYNE KONISENTA: Her name is

4 Jayne Konisenta. She is from Nahanni Butte. He said

5 that Parks Canada are very concerned about all the

6 vegetation, and they're talk about how we disturb

7 everything. We do take care of the land. And he say

8 we just live down in the valley.

9 He said there is no jobs in our

10 community. He said there are only the band office

11 that are giving jobs to the local people. And here

12 they're talking about the issues of plants, but they

13 do regrow again. But if we die, if we freeze, we're

14 not going to ever be here again.

15 So here we're looking at the money and

16 how we can go forward. But here we're talking about

17 different plants, and we need to be aware that things

18 do die and recover in time. But as human life, when

19 we die, we do not come back again.

20 So those kind of things that we're

21 thinking about, we need to think about the future use

22 of our young people. So we need to express our

23 opinions, and to me, it doesn't -- things are not

24 going right for us right at this moment.

25 And along of our Elders, whatever they

1 have expressed to us, those are the things that we're
2 following to this day. Thank you.
3
4 (INTERPRETATION CONCLUDED)
5
6 THE CHAIRPERSON: Questions from
7 Nahanni Butte Dene Band?
8 MR. GARTH WALLBRIDGE: Garth
9 Wallbridge, for the Band. No other questions. Thank
10 you.
11 THE CHAIRPERSON: Questions, Natural
12 Resource Canada?
13 MS. VICTORIA THOMAS: Victoria Thomas,
14 with Natural Resources Canada. We have no questions.
15 Thank you.
16 THE CHAIRPERSON: Questions, Canadian
17 Zinc?
18 MR. DAVID HARPLEY: Dave Harpley. No
19 questions.
20 THE CHAIRPERSON: Questions from Board
21 staff, or legal counsel?
22 MS. KATE MANSFIELD: Kate Mansfield,
23 Review Board.
24 One (1) of its supporting submissions
25 to technical reports was a paper from 2016 by Hauer,

et al, and the gist of this paper, if I could summarize, was that gravel-bed river floodplains are the ecological nexus of glaciated mountain landscapes.

I was wondering if you could, please, comment on if Parks Canada believes that Sundog Creek is an ecologically significant site within the Nahanni National Park Reserve and, if so, what this means using plain language?

(BRIEF PAUSE)

MS. ALLISON STODDART: Madam Chair, Allison Stoddart, with Parks Canada.

So I'm not -- I'm not sure if -- if I'll be able to explain this in plain language, but essentially Sundog Creek is within Nahanni National Park Reserve, and it is a fish bearing stream with ecological functions. It's part of the ecosystem.

And -- and so from Parks Canada's perspective it -- it being part of the ecosystem, and -- and part of the function of the ecosystem, it is a significant part of -- of the Park in that respect.

In terms of the project, you know, with -- with all of the proposed mitigations and measures that both Parks Canada and other parties have -- have

1 identified, it is -- it is still, you know, a
2 significant undertaking. However, we're -- we're
3 looking at -- at managing those -- those potential
4 impacts through those identified mitigations and --
5 and measures, as well as commitments that the
6 proponent has made.
7
8 (BRIEF PAUSE)
9
10 MS. ALLISON STODDART: Madam Chair,
11 can -- can my colleague add something to that?
12 MR. CAVAN HARPUR: Cavan Harpur, Parks
13 Canada.
14 Yeah, just to help articulate that, I
15 think. It's just to say that after the mitigations
16 and measures that we proposed, and the monitoring, as
17 well as our other colleague -- or parties, that would
18 still have -- it would still be a significant
19 ecological function in that region after it.
20 So while it does have a significant
21 role currently today, it would still have a
22 significant role in the future. With the proposed
23 mitigations and measures, it should be drastically
24 different -- significantly different, I guess is the
25 word for -- sorry.

1 (BRIEF PAUSE)

2

3 MS. KATE MANSFIELD: Kate Mansfield,

4 for the Review Board.

5 If I could just clarify. So you --

6 you're indicating that with the proposed mitigations

7 and measures that Parks Canada and other parties have

8 proposed, once they're in place you don't anticipate

9 there to be significant adverse effects to the way

10 that this ecosystem is able to function?

11 MR. CAVAN HARPUR: Madam Chair, Cavan

12 Harpur, Parks Canada.

13 Yeah. And we do -- we do plan -- I

14 agree with what you said, sorry. And, also, just we

15 will have monitoring programs in place as well to have

16 a threshold established to be able to look -- to

17 determine if there is impacts that we didn't

18 anticipate --

19 MS. ALLISON STODDART: And to

20 mitigate.

21 MS. CAVAN HARPUR: -- and to mitigate

22 -- adaptive management plans to mitigate those, to try

23 to maintain that ecological function.

24

25 (BRIEF PAUSE)

1 MS. CATHERINE FAIRBAIRN: Catherine
2 Fairbairn, with the Review Board. I have a series of
3 questions on vegetation that -- because Parks Canada
4 has brought that up in several different contexts.
5 So the first one (1), during the EA
6 some concerns were raised about the revegetation
7 methods, and this was reiterated in Parks Canada's
8 technical report within the section on reclamation
9 where Parks expressed concerns with some of the
10 revegetation techniques and stated that:
11 "Residual impacts to vegetation
12 communities are predicted, resulting
13 in a decrease in ecological
14 integrity."
15 So my question to Parks Canada is just
16 if you could please describe some of those residual
17 impacts and provide a bit more information?
18 MS. ALLISON STODDART: Hi. Parks Ca -
19 - or Allison Stoddart, with Parks Canada.
20 Just as a note, we will be presenting
21 on reclamation tomorrow as it was identified in the
22 agenda for tomorrow. So I don't know if you want to
23 wait until we present on reclamation, and then we can
24 answer the questions tomorrow, or would you like to do
25 that today?

1 MS. CATHERINE FAIRBAIRN: Catherine
2 Fairbairn. Yes, so my question was specific to the
3 comments in that section that were on vegetation. So
4 if you -- if you're able to answer today, then that's
5 fine, but it can wait until tomorrow as well if you
6 prefer to address it then.
7 MS. ALLISON STODDART: Madam Chair,
8 Allison Stoddart, with Parks Canada. I think we'll
9 leave it until tomorrow if that's all right. Thanks.
10 MS. CATHERINE FAIRBAIRN: Catherine
11 Fairbairn, with the Review Board.
12 So a follow-up with another question
13 about residual effects. In your technical report
14 Parks Canada stated that there are potential -- or
15 that you believe potential significant impacts to
16 plant communities could result from either direct or
17 indirect effects. And you stated that it is Parks
18 Canada's opinion that you do not currently have enough
19 information to determine the significance of impacts.
20 So with that in mind, I was just
21 wondering if you could sort of describe under what
22 conditions you believe that there would be likely
23 residual impacts and maybe, you know, related to
24 vegetation, some of the pathways you've identified are
25 clearing or permafrost thaw. You've talked about rare

1 plants, invasive species.

2 And so I know you can't -- you don't

3 feel you can make a specific determination of

4 significance, but I was wondering if you could

5 describe what residual impacts you predict under

6 different conditions?

7

8 (BRIEF PAUSE)

9

10 MS. AUDREY STEEDMAN: Thank you, Madam

11 Chair. Audrey Steedman, with Parks Canada.

12 Yes, Parks Canada has identified that

13 there's gaps in the vegetation baseline. To date, the

14 collective surveys that have been done, there's been

15 some -- some gaps in getting adequate coverage of

16 representative vegetation and adequate coverage of

17 areas of high rare plant potential.

18 In addition, the survey methods haven't

19 taken into account timing to optimize detection of all

20 species. At different times in the flowering season

21 different species are best detected. So industry

22 standard best practices require multiple -- multiple

23 surveys within a summer.

24 And so it's Parks Canada's position

25 that Canadian Zinc's commitment to undertake a spring

1 rare plant survey will address those gaps in the
2 baseline with appropriate methods designed in
3 consultation with Parks Canada.
4 MS. CATHERINE FAIRBAIRN: Catherine
5 Fairbairn, with the Review Board. Thank you. That
6 answered one (1) of my other questions.
7 As a follow-up to that, in Parks
8 Canada's technical report and on your slide here,
9 you've also recommended an updated effects assessment
10 for vegetation. And I was wondering if you could
11 comment on how Parks Canada thinks that could work and
12 whether it could instead be satisfied by specific
13 mitigation within the rare plant management plan or
14 other adaptive management approaches following this
15 baseline work?
16
17 (BRIEF PAUSE)
18
19 MS. AUDREY STEEDMAN: Thank you, Madam
20 Chair. Audrey Steedman, with Parks Canada.
21 So it's Parks Canada's view that the --
22 the spring rare plants are a way that Canadian Zinc
23 has committed to. The timing of that would be
24 necessary before the permitting phase of the project,
25 if we do arrive at that, and the reasons for that

1 being that the purpose of the baseline information is
2 to inform the assessment of potential effects of the
3 project and to see what if any mitigations are
4 necessary to reduce or eliminate those effects.
5 Prior to permitting, Parks Canada would
6 like to ensure that a fully informed effects
7 assessment has outlined the required mitigations that
8 will need to be conditions of our permits.
9 Parks Canada will only issue permits
10 under the assumption that the resulting activities
11 will not impair the park's ecological integrity. And
12 in order to be confident in that assumption, the
13 effects assessment and the resulting mitigations need
14 to be based on a comprehensive understanding of the
15 baseline conditions. Thank you.
16 MS. CATHERINE FAIRBAIRN: Catherine
17 Fairbairn. Thank you very much.
18 THE CHAIRPERSON: Legal counsel?
19 MR. JOHN DONIHEE: Thank you, Madam
20 Chair. It's John Donihee. I want to explore things
21 at a -- explore some things with you at a slightly
22 higher level. And my questions are similar to those
23 that I asked to Department of Fisheries and Oceans.
24 So to start then, I just want to
25 confirm that Parks Canada is -- your minister will act

1 both as a responsible minister for purposes of
2 decision making on the Report of Environmental
3 Assessment, and that you also play a regulatory role
4 in respect of the future activities of Canadian Zinc
5 and this all-weather road project.
6 MS. ALLISON STODDART: Allison
7 Stoddart, with Parks Canada. That is correct.
8 MR. JOHN DONIHEE: I note from -- and
9 it's John Donihee. I note from your technical report
10 an indication that Parks Canada also has
11 responsibilities under subsection 79(2) of the Species
12 -- Federal Species at Risk Act.
13 And I'll -- I'll just -- in the past
14 when there have been questions about listed species in
15 -- in matters that have ended up before the Review
16 Board, it's been our understanding that it's the
17 Review Board's responsibility to deal with subsection
18 79(2), in -- at least in respect of the way that the
19 results of the impact assessment may mitigate effects
20 on listed species.
21 I -- I don't need to have a -- much of
22 a conversation about this with you here, but given
23 that you've also indicated that Parks Canada has a
24 role in relation to that particular subsection of the
25 Act, I'm wondering if I could ask you simply to

1 address in specific terms, in your final argument, the
2 role that you see Parks Canada playing in respect of
3 subsection 79(2) and to please relate that to the role
4 that you understand that the Review Board would have
5 in addressing that subsection.
6 Could you do that at the end of this
7 process in your final argument, please.
8 MS. ALLISON STODDART: Allison
9 Stoddart, with Parks Canada. We can definitely
10 outline what our role is with regards -- what Parks
11 Canada's role is with regards to section 72 -- 79(2)
12 of the Species at Risk Act. However, I -- I don't
13 think Parks Canada would feel comfortable outlining
14 the role of the Board under 79(2).
15 So I think -- I think if we provide you
16 our role, that -- that should likely suffice.
17 MR. JOHN DONIHEE: Thank you. It's
18 John Donihee again. I probably should have been a
19 little more careful in the way I asked the question.
20 What I'm wondering is whether we can both have a role
21 under subsection 79(2). So if you'll address that
22 point we could leave it there.
23 MS. ALLISON STODDART: Allison
24 Stoddart, Parks Canada. That's okay. Yes, thanks.
25 MR. JOHN DONIHEE: Thank you, Madam

1 Chair. John Donihee, again.

2 The next point that I want to explore

3 with you a bit is in relation to Parks Canada and your

4 Minister's responsibility, priority, I guess, in -- in

5 accordance with subsection 8(2) of your Act to

6 preserve the ecological integrity of -- of the park.

7 And I think from the Review Board's

8 perspective, it would help to try to understand the

9 relationship between your -- the concept and the

10 application of this ecological integrity principle and

11 the role of the Review Board in identifying adverse

12 effects, or impacts on the environment pursuant to the

13 Mackenzie Valley Resource Management Act.

14 So that -- that's the issue that I'm

15 wanting to explore, I guess, with -- with a couple of

16 questions. It seems to me that ecological integrity

17 is a -- a -- there are different ways to express this,

18 I suppose, but it's a much lower threshold than

19 finding an adverse effect, and then to try to help a

20 little further before I ask the question, I guess what

21 I'd like to suggest to you that -- is that it's quite

22 possible that there could be an adverse effect, an --

23 an impact from a project, but that that impact would

24 fall short of actually changing or threatening the

25 ecological integrity of the whole park.

1 Is that -- is that a fair way to -- to
2 try and understand these two (2) concepts?
3 MS. ALLISON STODDART: Allison
4 Stoddart, with Parks Canada.
5 That's -- that's definitely a fair
6 characterization. Ecological integrity is a -- is a
7 broad concept. And -- and if you -- if you'd like, I
8 -- I'm happy to -- to go into that a little bit, or I
9 can just say, Yes, I agree with you.
10 MR. JOHN DONIHEE: It's John Donihee.
11 Agreeing with me is a good start, but I don't want to
12 cut you off.
13 So I -- I guess -- you know, what I'm -
14 - I did mention this to your colleague Mr. Tsetso this
15 morning and -- and, you know, I just want -- I'm
16 hoping that we can understand from the Board's side
17 how, you know, our -- our search, I guess, our -- our
18 review of the evidence with a view to try to determine
19 whether there will be residual impacts on the
20 environment, whether -- whether, in fact, that has --
21 has any relationship really to this question of
22 ecological integrity.
23 My -- my sense of it is that in a broad
24 -- you know, on a very broad level they're related but
25 that in terms of the specifics of our job, that

1 there's no -- no direct relationship or correlation
2 that we need to be concerned about.
3 May -- maybe you would comment on that
4 for me, please?
5 MS. ALLISON STODDART: Allison
6 Stoddart, with Parks Canada.
7 So essentially, you know, when Parks
8 Canada is evaluating impacts of a project on, in this
9 case Nahanni National Park Reserve, at first we look
10 at and consider the impacts on ecological integrity.
11 And so for -- for your sake I can -- I can give you an
12 idea of what that means.
13 And so ecologic -- ecological integrity
14 is defined as a condition that is determined to be
15 characteristic of its natural region and likely to
16 persist, including abiotic components, and the comp --
17 the composition and abundance of native -- native
18 species and biological communities, their rates of
19 change, and supporting processes. So it's a broad
20 ecosystem approach to looking at impacts.
21 Now, that being said, under the MVRMA
22 we're tasked with looking at -- at impacts on a -- on
23 a broad range of things. And so in -- in many
24 respects it's -- it's not dissimilar. And so, you
25 know, when Parks Canada looks at impacts of a project,

1 yes, we have ecological integrity in mind but we're
2 also looking at -- at all of the potential impacts of
3 the project as defined by the MVRMA.
4 And so in -- in the case of -- of the
5 project at hand, in our technical report we've
6 essentially outlined those remaining areas where --
7 where we're still -- we still have concern with
8 regards to the potential impact. And at this point,
9 as you can see from our presentation today and
10 yesterday, and you will tomorrow, a number of our
11 concerns have already been dealt with through
12 commitments that Canadian Zinc has -- has made in
13 their commitment's table, as well as through
14 discussions that we've had throughout the hearings.
15 And then our -- our presentations will
16 highlight those areas where we still have potential
17 measures that we think would be necessary to put in
18 place for Parks Canada to feel comfortable that there
19 are no residual impacts on Nahanni National Park
20 Reserve, taking into considerations impacts on
21 ecological integrity.
22 MR. JOHN DONIHEE: Thank you, Madam
23 Chair. John Donihee. Thank -- thanks for that
24 answer.
25 You -- you anticipated perhaps my --

1 where I was going next but I -- I do want to refer to
2 page 58 of your technical report, and I'll -- I'll
3 just quote to you. I'm sure -- sure you have it
4 available but it says:
5 "Parks Canada -- Parks Canada's
6 avail -- analysis of the DAR for the
7 proposed all season road focussed on
8 the potential impacts of all phases
9 of the proposed project."
10 And you end up saying really that where
11 information was missing that you determined a
12 reasonable worst case environmental impact, and that
13 was what you predicted.
14 And I'm -- I'm just curious if you
15 could explain to us what -- what exactly you mean by
16 "a reasonable worst case environmental impact?"
17 MS. ALLISON STODDART: Allison
18 Stoddart, with Parks Canada.
19 So essentially, this refers to those
20 areas where we lacked baseline information to really
21 understand what the potential impact would be. And I
22 can say at this point in time, we've had a number of
23 discussions with the proponent, and many of our
24 baseline concerns are being discussed and have been
25 committed to at this point.

1 So essentially, what Parks Canada was
2 doing in the absence of data, we would then assume the
3 worst possible outcome in -- in the sense of, for
4 example, if we didn't know if there was a species at
5 risk that could be impacted then we had to assume that
6 there could be a species at risk impacted.
7 So that's just an example of -- of
8 looking at, you know, the worst possible scenario.
9 But with baseline information, we then have that data
10 to -- to make a determination as to whether or not
11 that's actually the case.
12 And so as I've said, you know, for
13 example we're working with Canadian Zinc on developing
14 a baseline study for -- for birds, as well as they've
15 committed to doing baseline work with regards to
16 collared pika. So we're -- we're moving towards a
17 situation where I think we can make much more informed
18 decisions on the potential impacts of the assessment.
19 MR. JOHN DONIHEE: Thank you, Madam
20 Chair. John Donihee. Thank -- thank you for the
21 answer.
22 What I take from it then is that where
23 Parks Canada upon review of the evidence provided by
24 Canadian Zinc decided that there were gaps in the
25 information, that you have predicted a worst case

1 scenario as -- as an outcome out of an abundance of
2 caution.
3 But I -- I just want to be clear then
4 that what -- where -- where we're looking at these
5 sorts of determinations in your submissions to the
6 Board, there's no evidence to support them; in fact,
7 you make them when there is no evidence.
8 And -- and so I'm -- I'm wondering
9 really what -- what's the basis or authority for the
10 prediction. Is it really just professional judgment
11 on behalf of Parks Canada or do you have experience
12 from other instances? I -- I don't think there are
13 many roads in parks, but, you know, do you have other
14 -- other experience that, you know, might give the
15 Board some comfort with respect to the foundation for
16 the -- the prediction that you're making?
17 MS. ALLISON STODDART: Allison
18 Stoddart, Parks Canada. So I'm just -- I'm just going
19 to say something a little more overarching here, and
20 then we'll have a discussion about it.
21 So in our technical report Parks Canada
22 didn't actually make determinations of significance.
23 We -- we did indicate that there were areas where
24 there was potential for significant impacts, and --
25 and those determinations of potential for significance

1 of course were based on our -- our expert, the folks
2 within Parks Canada, as well as consultants that we
3 have hired to help us determine that.
4 And -- and again, with -- with areas
5 where there was lack of information, you know, that --
6 that could also have led to a potential for a
7 significant effect if we didn't know what was there.
8 So if you'd like some more detailed
9 examples from us, we're happy to provide that to you.
10
11 (BRIEF PAUSE)
12
13 MR. JOHN DONIHEE: Sorry for the --
14 the sidebar delay. John Donihee again.
15 I don't really want to belabour the --
16 the conversation this afternoon. It -- it does strike
17 me as well from some of your answers that it -- it
18 sounds as though, because of your efforts to work
19 things out with Canadian Zinc, that the situation is -
20 - is evolving, I -- I suppose, in terms of Parks
21 Canada's position.
22 So let -- let's just focus for a moment
23 then on the -- the final submissions that Parks Canada
24 will make in -- in this proceeding. You know, the
25 Board -- the Board's process is evidence driven. And,

1 as our rules indicate, you know, there is an onus on
2 any -- any party that's making a recommendation to the
3 Board to provide sufficient evidence to support the
4 recommendation or the measure that they're suggesting
5 ought to be imposed.
6 So maybe I can leave it this way and --
7 and just request then that in the final submissions
8 made by Parks Canada, that you reflect on all of the
9 conversations and work you've been doing with Canadian
10 Zinc, give us your final position with respect to
11 these gaps and the problems that may result.
12 And we also need a position from Parks
13 Canada with respect to the question of whether or not
14 any of the remaining concerns or problems will, in --
15 in your opinion, result in significant adverse impacts
16 on the environment. Now, is that -- I trust that
17 that's a reasonable request to make of you in respect
18 of your final submissions. And if you're amenable to
19 that, I won't have any more questions.
20
21 (BRIEF PAUSE)
22
23 MS. ALLISON STODDART: Allison
24 Stoddart, with Parks Canada.
25 So the reason that we're having a -- a

1 little bit of a sidebar discussion here is that there
2 -- there are some situations, for example, where we're
3 looking for baseline information, and we don't -- we
4 don't have that information currently.
5 And so it's difficult for Parks Canada
6 to make a -- an absolute determination of -- of
7 significance without that information. You know, we
8 can identify to the Board if the Proponent has
9 committed to doing that baseline information and --
10 and then, following that, there will be, you know, an
11 identification of potential effects and associated
12 mitigations with that.
13 But again, it's difficult -- it will be
14 difficult in some situations for Parks to -- to say
15 for certain whether or not something's going to have a
16 -- a significant effect or not.
17 We can provide the best information
18 that -- that we have at -- at the time of closing, and
19 -- and we will endeavour to do that.
20 MR. JOHN DONIHEE: Thank you, Madam
21 Chair. John Donihee. I -- I think that that's
22 probably the best that you can do.
23 The -- the concern, I -- I suppose that
24 we have is that -- that, you know, in the -- in the
25 cont -- the con -- there are some sit -- situations

1 where the Board ends up having submissions made to it,
2 for example, about such things as the precautionary
3 principle and -- and that kind of thing.
4 I -- I don't -- I'm not suggesting that
5 to you, but the issue really is making sure that the
6 things that are important to Parks Canada and -- and
7 that could be adversely affected are actually
8 identified for the Board.
9 Now, I leave it to you and -- and your
10 efforts in terms of what sort of actual information
11 you may have. But I would suggest as well that if
12 there had been similar situations elsewhere, you know,
13 that -- that comparison, I suppose, comparative
14 information, you know, in the absence of baseline, you
15 -- you have to do something to try to manage.
16 And so in this particular instance, I -
17 - I leave that to you. But -- but I do want to say
18 that, at the end of the day, if you are going to be
19 making recommendations for measures in your final
20 submissions to the Board, that we're going to want to
21 see some -- some kind of foundation for -- for those
22 recommendations.
23 So, Madam Chair, perhaps we can leave
24 it there for now.
25 THE CHAIRPERSON: Questions from Board

1 members? Bertha...?

2 MS. BERTHA NORWEGIAN: Thank you,

3 Madam Chair. Bertha Norwegian.

4 In looking at your presentation, you

5 talk about hab -- habitat composition as well as rare,

6 valued, and protected plants and assemblages. Many of

7 us know that the national park has plant life that is

8 unique only to the Nahanni region in all of the world.

9 So I'm not really sure whether it's

10 been clearly stated within your presentation, whether

11 or not Parks Canada is concerned that some of the

12 plant life and vegetation that we are talking about is

13 evident within the area of scope that's being proposed

14 by Canadian Zinc.

15

16 (BRIEF PAUSE)

17

18 MS. AUDREY STEEDMAN: Thank you, Madam

19 Chair. Audrey Steedman, with Parks Canada.

20 Parks Canada has identified that --

21 that there are areas of high rare plant potential

22 within Nahanni National Park Reserve with respect to

23 karst terrain and the presence of glacial refugia in

24 particular, and Parks Canada is concerned with -- with

25 impacts to rare -- rare and protected species and

1 assemblages, which is why we've identified these gaps
2 in the baseline and have requested that additional
3 information. Thank you.
4 MS. BERTHA NORWEGIAN: Thank you,
5 Madam Chair. Bertha Norwegian.
6 The Nahanni National Park has been in
7 existence for a number of decades now. I find it
8 somewhat troubling that you do not have your own
9 baseline. Is this -- or am I getting it all wrong?
10 We're asking for baseline information
11 and -- and it's not unusual for government
12 departments, whether federal or territorial, to have
13 benchmark figures on -- in this particular situation
14 on foliage and plant life that's unique only to the
15 Nahanni National Park and the area that's being
16 discussed with respect to the all-season road. Thank
17 you kindly.
18 MR. JONATHAN TSETSO: Thank you, Madam
19 Chair. Jonathan Tsetso, with Parks Canada.
20 Thank you for the question, and I think
21 it's a good one. However, I think there's one (1)
22 point that I'll -- I'll have to clarify is the park
23 was originally established in 1976, and the park
24 boundary at the time largely followed the south
25 Nahanni River corridor and parts of the Flat River.

1 In 2009, the -- the park was expanded
2 into what is the -- the project area. So in that
3 time, it -- it is relatively new parkland, so that's
4 the dataset that was not collected, because it would
5 have beyond our mandate prior to 2009. Does that
6 answer your question?
7 MS. BERTHA NORWEGIAN: Thank you,
8 Madam Chair. Thank you for your answers.
9 THE CHAIRPERSON: Questions from Board
10 members?
11 MS. YVONNE DOOLITTLE: Yeah.
12 THE CHAIRPERSON: Yvonne...?
13 MS. YVONNE DOOLITTLE: Hi, this is
14 Yvonne Doolittle. In your presentation, you stated
15 that Sundog Creek in that area was a key link to the
16 energy system of the area.
17 And so you're stating to us today that
18 if there is adaptive management, that you feel
19 comfortable in -- in stating that there is not going
20 to be any significant adverse impacts to your reserve?
21
22 (BRIEF PAUSE)
23
24 MR. CAVAN HARPUR: Madam Chair, Cavan
25 Harpur, Parks Canada.

1 Just a point of clarification, it was
2 with regards to the benthics being an important
3 trophic link, or energy transfer link in the system in
4 that portion of Sundog. And we believe that with the
5 monitoring program and adaptive management plan, that
6 those concern -- that should -- yeah, that that should
7 alleviate our main concerns.
8 THE CHAIRPERSON: Okay. Thank you
9 very much, Parks Canada, for your presentation. We
10 will now take a ten (10) minute break before we start
11 the next presentation.
12
13 --- Upon recessing at 3:10 p.m.
14 --- Upon resuming at 3:35 p.m.
15
16 THE CHAIRPERSON: Okay. If we could
17 start with our next presenters, please. It's
18 Environment and Climate Change Canada. Welcome.
19
20 PRESENTATION BY ENVIRONMENT AND CLIMATE CHANGE CANADA:
21 MR. BRADLEY SUMMERFIELD: Thank you,
22 Madam Chair. Good afternoon. My name is Bradley
23 Summerfield. I'm a senior environmental assessment
24 coordinator with Environment and Climate Change
25 Canada. And with me today is Emily Nichol, who is an

1 environmental assessment coordinator with Environment
2 and Climate Change Canada, as well.
3 This afternoon I'm going to be
4 presenting the water portion of Environment and
5 Climate Change Canada's technical submission. A brief
6 overview, I will very briefly touch on the
7 departmental mandate and the relevant legislation, and
8 then I will go through our recommendations for the
9 Board.
10 Environment Canada's -- Environment and
11 Climate Change Canada's mandate with respect to water
12 includes to preserve and enhance the quality of the
13 natural environment, and to conserve and protect
14 Canada's water resources. This mandate is fulfilled
15 through the pollution and prevention provisions of the
16 Fisheries Act.
17 Our first topic is borrow sources'
18 potential for acid rock drainage and metal leaching.
19 The Proponent has agreement that all representative
20 units should be sampled at all potential borrow source
21 locations, that testing should be completed using
22 acid-base accounting and metal leaching test methods
23 to characterize representative units, and that testing
24 should be overseen by a qualified professional
25 geochemist.

1 Environment and Climate Change Canada
2 notes that marginal borrow material sources, as
3 originally defined by the Proponent, should be avoided
4 as once they are exposed, it can be difficult to
5 mitigate or to ensure that source rock with acid rock
6 drainage or metal leaching potential will not create
7 adverse water quality issues down the road.
8 With regard to the Sediment and Erosion
9 Control Plan, the Proponent is in agreement that the
10 Sediment and Erosion Control Plan should be reviewed
11 and finalized prior to construction, that erosion and
12 sediment control measures should be put in place when
13 constructing around fish-bearing water bodies, and
14 that appropriate setback distances from fish-bearing
15 waters should be determined and implemented based on
16 onsite conditions for the storage of potential total
17 suspended solids generating materials.
18 At a minimum, Environment and Climate
19 Change Canada notes that monitoring should be
20 completed during construction periods, prior to spring
21 freshet, and when rainfall events are forecast. This
22 monitoring would be in addition to visual monitoring
23 of sediment and erosion control measures to ensure
24 that measures are effective.
25 Further on water quality monitoring,

1 the proponent has committed to monitoring accessible
2 and representative streams to construct a linear
3 regression that may be applicable to other streams.
4 Environment and Climate Change Canada
5 notes that baseline analysis of turbidity and total
6 suspended solids should be completed prior to and also
7 during construction so that the site-specific
8 relationship between turbidity and total suspended
9 solids can be established if it is to be used. The
10 proponent has also committed to establishing
11 mitigation measures and trigger levels which will be
12 based on percentage differences of turbidity.
13 The last area I'm going to speak to is
14 the contaminant loading management plan. The
15 proponent has committed to implementing mitigation
16 measures with the intention of preventing dust from
17 leaving the mine site and has agreed to include the
18 monitoring proposed by Environment and Climate Change
19 Canada in the contaminant loading management plan.
20 Environment and Climate Change Canada
21 notes the importance of monitoring for contaminants
22 along the full length of the road, including to
23 establish baseline information, trigger and action
24 levels, and adaptive management and contingency plans
25 if trigger or action levels are exceeded.

1 This concludes our presentation. And
2 we would be happy to answer any questions or receive
3 any comments.
4
5 QUESTION PERIOD:
6 THE CHAIRPERSON: Okay. Thank you for
7 the presentation. Questions, Dehcho First Nations?
8 MS. CARRIE BRENEMAN: Carrie Breneman,
9 Dehcho First Nations. I have a question of what's
10 included in a contaminant loading management plan.
11 MR. BRADLEY SUMMERFIELD: Sure. So on
12 the record there is a response, I believe it's
13 Undertaking 35, from -- from the technical session
14 where Environment and Climate Change Canada sort of
15 outlined this information. And there's been some
16 discussions with Canadian Zinc regarding that.
17 But briefly what that would contain
18 would just be a further description, the details of
19 where those monitoring sites would be, exactly what
20 they would be monitoring for in duration, frequency,
21 as well as we would want to see -- again, Canadian
22 Zinc has -- has offered this up, so I assume it will
23 be in the plan, a more detailed description of those
24 mitigation ma -- measures that they plan on using and
25 the establishment of -- of those thresholds that we're

1 referring to.

2 THE CHAIRPERSON: Just a reminder when

3 you speak, to state your name always for the record.

4 MR. BRADLEY SUMMERFIELD: Sorry.

5 Bradley Summerfield, with Environment and Climate

6 Change Canada.

7 MS. CARRIE BRENEMAN: Carrie Breneman,

8 Dehcho First Nations. We have no further questions.

9 THE CHAIRPERSON: Questions, Fisheries

10 and Oceans Canada?

11 MS. VERONIQUE D'AMOURS GAUTHIER:

12 Veronique D'Amours Gauthier, with Fisheries and Oceans

13 Canada. I don't have any question. Thank you.

14 THE CHAIRPERSON: Questions,

15 Government of the Northwest Territories?

16 MS. LORRAINE SEALE: Lorraine Seale,

17 GNWT. We have no questions.

18 THE CHAIRPERSON: Questions,

19 Indigenous and Northern Affairs Canada?

20 MS. MIKE ROESCH: Mike Roesch, for

21 INAC. And we have no questions. Thank you.

22 THE CHAIRPERSON: Questions, Liidlii

23 Kue First Nations?

24 MR. DEAN HOLMAN: Dean Holman, from

25 Liidlii Kue First Nations. We have no questions at

1 this time. Thank you.

2 THE CHAIRPERSON: Questions, Nahanni

3 Butte Dene Band?

4 MR. GARTH WALLBRIDGE: Thank you,

5 Madam Chair. Garth Wallbridge, on behalf of the Dene

6 Band. I'm kind of chuckling because we lawyers are

7 taught to, you know, never ask a question unless

8 you're pretty sure you know the answer.

9 And I think I know the answer to this,

10 but I'm not -- on your slide number 5, you have

11 towards the end of the second paragraph, when you're

12 talking about monitoring, you talk about when rainfall

13 events are forecast.

14 What's a rainfall event, and who's

15 doing the forecast, just in a general sense? Like are

16 you meaning during the entire 365 days of the year

17 except when it's below freezing? I'm just -- I'm

18 curious to understand the definition there, please.

19 MR. BRADLEY SUMMERFIELD: Sure.

20 Bradley Summerfield, with Environment and Climate

21 Change Canada.

22 So the first part of the question --

23 Who's doing the forecast? -- ironically, that would be

24 Environment and Climate Change Canada's

25 responsibility.

1 With reference to this, it is not --
2 not heavily defined, and this is in relation to what
3 Parks Canada was talking about, about establishing the
4 relationship between the total suspended solids and
5 the turbidity.
6 So you need to collect field
7 measurements of both under variable conditions in
8 order to be able to establish that relationship so
9 that turbidity can be used in place of total suspended
10 solids for -- for the monitoring program. Does
11 that...
12 MR. GARTH WALLBRIDGE: Garth
13 Wallbridge. That explains sort of why you want the
14 information.
15 But in terms of a rainfall event, are
16 we talking any amount of rainfall, or are you talking
17 the one (1) or two (2) or three (3) big storms through
18 a year?
19 MR. BRADLEY SUMMERFIELD: Bradley
20 Summerfield, with Environment and Climate Change
21 Canada.
22 We would be talking more significant
23 rainfall events to have unusual conditions, not the
24 day-to-day, a higher flow that would be different than
25 your normal flow in order to get a variable data set.

1 MR. GARTH WALLBRIDGE: Thank you.
2 THE CHAIRPERSON: Questions, Natural
3 Resources Canada?
4 MS. VICTORIA THOMAS: Victoria Thomas,
5 with Natural Resources Canada. We have no questions,
6 thank you.
7 THE CHAIRPERSON: Questions, Parks
8 Canada?
9 MS. ALLISON STODDART: Allison
10 Stoddart, Parks Canada. We have no questions.
11 THE CHAIRPERSON: Questions, Canadian
12 Zinc?
13 MR. DAVID HARPLEY: Dave Harpley. No
14 questions.
15 THE CHAIRPERSON: Questions, Board
16 staff?
17 MS. CATHERINE FAIRBAIRN: Hi. This is
18 Catherine Fairbairn, with the Review Board staff. So
19 my first question is about acid rock drainage and
20 metal leaching.
21 Based on the information on the record,
22 does Environment and Climate Change Canada believe
23 that there are likely to be residual adverse impacts
24 from acid rock drainage or metal leaching? And if so,
25 can you describe those impacts?

1 MR. BRADLEY SUMMERFIELD: Bradley
2 Summerfield, with Environment and Climate Change
3 Canada.
4 Based on what is in -- on the record,
5 which would be our recommendation that the prediction
6 manual for drainage chemistry from sulfidic geological
7 materials be used as well as the commitment to have
8 the professional geochemist, if -- if these
9 recommendations were taken into account, then, no, we
10 would not expect to see that.
11 MS. CATHERINE FAIRBAIRN: Catherine
12 again. Thank you. Question about -- similar question
13 about concentrate dust from transporting concentrate.
14 Is Environment and Climate Change
15 Canada concerned, again based on the current
16 information on the record and Can Zinc's response to
17 your technical report, that there are likely residual
18 adverse effects from concentrate loading? And again,
19 if so, can you describe those effects?
20 MR. BRADLEY SUMMERFIELD: Thank you.
21 Bradley Summerfield, with Environment and Climate
22 Change Canada.
23 Again, based on what's on the record,
24 Canadian Zinc, we've had a lot of discussions back and
25 forth, and they have committed to our recommendations

with regards to the prevention of the dust leaving the site, as well as how it is transported between the lead and the zinc.

So, no, but we would still like to see the monitoring plan in order to continue to verify that ours and Canadian Zinc's predictions are correct, and the appropriate mitigations should we both be wrong.

(BRIEF PAUSE)

MS. CATHERINE FAIRBAIRN: Catherine Fairbairn, with the Review Board. Thank you for your answers.

THE CHAIRPERSON: Legal counsel?

MR. JOHN DONIHEE: Thank you, Madam Chair, it's John Donihee.

Mr. Summerfield, I've -- I've gone through Environment Canada's technical report and I searched for the word 'significant' in the report. It doesn't -- it's not in there.

And my colleague here has just asked you a couple of questions about acid rock drainage. I -- I note in your technical report that Environment and Climate Change Canada has made a -- a number of

1 recommendations. And in answer to the -- the two (2)
2 previous questions you said that if the
3 recommendations that your department has made are
4 implemented, that in your view there will not be any
5 significant residual effects.
6 And so the question I have for you is
7 this: If you look at all of the recommendations that
8 are contained in ECCC's technical report, can you
9 confirm that you have commitments to addre -- from
10 Canadian Zinc to address all of those matters so that
11 all of Environment Canada and Climate Change Canada's
12 concerns are taken care of?
13 MR. BRADLEY SUMMERFIELD: It's Bradley
14 Summerfield, with Environment and Climate Change
15 Canada.
16 We're -- so can we keep it to the
17 issues that we're talking about today, or you want to
18 talk about the -- all the wildlife stuff tomorrow as
19 well?
20 MR. JOHN DONIHEE: Thank you, Madam
21 Chair. Well, I'll ask you the same question tomorrow.
22 I'm happy to do it that way.
23 But the point that -- you know, from
24 the standpoint of the Board I think what we want to
25 know is whether all of the concerns are identified by

1 Environment and Climate Change Canada that resulted in
2 recommendations in your technical report have been
3 resolved between yourselves and Canadian Zinc so that
4 the Board at the end of the day can simply conclude
5 that any environmental concerns, or any impacts that
6 are within your department's mandate have been
7 addressed.
8 So let me ask you -- ask you this then,
9 I will ask you to undertake to review your technical
10 report and your hearing submission and to advise the
11 Board with respect to each of the recommendations made
12 by your department as to whether or not it's your view
13 that those matters have been addressed satisfactorily
14 in commitments or other mitigation proposed by the
15 Developer. Would you undertake to do that, sir?
16 MR. BRADLEY SUMMERFIELD: It's Bradley
17 Summerfield, with Environment and Climate Change
18 Canada.
19 Yes, and I wonder if that would be part
20 of the closing -- closing submission or you want that
21 as a standalone undertaking? Either would be fine
22 with us.
23 MR. JOHN DONIHEE: Let -- let's say
24 then provide it to the Board in -- in your closing
25 argument. It -- it's six (6) of one (1), half a dozen

1 of another for us as well, so we'll give you the extra
2 -- the extra time that goes with -- and it should give
3 you the opportunity to review the rest of the -- of
4 the record as well.
5 So if -- rath -- then, Madam Chair, I -
6 - I should say, rather than identifying that one (1)
7 as an undertaking, we'll simply accept the commitment
8 from Environment and Climate Change Canada to include
9 that analysis in their closing arguments in this
10 proceeding and that's satisfactory, hopefully, to the
11 Board as well.
12 MR. BRADLEY SUMMERFIELD: Bradley
13 Summerfield, with Environment and Climate Canada.
14 Yes, that is absolutely find and we
15 appreciate the extra time.
16 MR. JOHN DONIHEE: Thank you, Madam
17 Chair. It's John Donihee.
18 Mr. Summerfield, let's -- let's try
19 this last question, it's an either/or, but assuming
20 that all of your concerns have been identified, could
21 you advise the Board now as to whether or not your
22 department's position -- you know, will -- will your
23 department's position be then that there are no
24 significant residual effects from this project, and
25 that there are -- there's no need for measures to

1 address Environment and Climate Change Canada's
2 concerns?
3 So hopefully that's clear enough. I...
4
5 (BRIEF PAUSE)
6
7 MR. BRADLEY SUMMERFIELD: It's Bradley
8 Summerfield, with Environment and Climate Change
9 Canada.
10 I wonder if we could indicate that in
11 our closing submission, as well?
12 MR. JOHN DONIHEE: John Donihee.
13 Yes, thank you, Mr. Summerfield.
14 That's fine. If you'll do it in the closing
15 submission, we simply want to know that if all of
16 these commitments are made what -- what your final
17 position is with respect to impacts or significant
18 impacts. So if you'll include that in your final
19 submissions, that would be most helpful.
20 And I would also say then, of course,
21 if there are outstanding matters with respect to the
22 recommendations you've made that we'll expect to hear
23 from you about those in your closing comments, as
24 well.
25 So is that satisfactory?

1 MR. BRADLEY SUMMERFIELD: Bradley
2 Summerfield, with Environment and Climate Change
3 Canada.
4 Absolutely, that sounds reasonable.
5 MR. JOHN DONIHEE: Thank you, Madam
6 chair. Those are my questions. I believe my
7 colleague has one (1) more.
8 MR. TOBY PERKINS: Toby Perkins, for
9 the Board.
10 Just one (1) quick question. So the
11 hydrological info -- information that's currently
12 available for the project for determining peak flows
13 is three (3) regional stations, and for determining
14 main and average conditions is -- is one (1) station,
15 the station at Prairie Creek.
16 Do you believe this is sufficient
17 information to support the erosion and sediment
18 control planning that's going to be required for the
19 project, considering that the road covers over 180
20 kilometres of alignment?
21 MR. BRADLEY SUMMERFIELD: It's Bradley
22 Summerfield, Environment and Climate Change Canada.
23 I would have to take that as an
24 undertaking. I'm not sure.
25 MR. TOBY PERKINS: Toby Perkins.

1 That's fine. So, yeah, we'd be looking for an
2 undertaking to confirm the -- that the currently
3 available information is sufficient to support erosion
4 and sediment control plans -- planning.
5 MR. JOHN DONIHEE: Madam Chair, John
6 Donihee.
7 That'll be Undertaking number 7 then
8 for Environment Canada to respond to that question
9 asked by Board staff.
10
11 --- UNDERTAKING NO. 7: To Environment Canada:
12 Peak flow conditions for
13 the project area are based
14 on analysis of three
15 regional WSC stations and
16 normal flow conditions for
17 the project area are based
18 on data at one station
19 (Prairie Creek). Does
20 ECCC believe this
21 information is sufficient
22 to support preparation of,
23 and commitments within,
24 Project erosion and
25 sediment control plans

1 MR. JOHN DONIHEE: And that's all the
2 questions from this table, Madam Chair.
3 THE CHAIRPERSON: Thank you.
4 Questions from Board members? Sunny...?
5 MS. SUNNY MUNROE: Thank you, Madam
6 Chair. I just have one (1) question which goes back
7 to what Mr. Wallbridge was asking you.
8 You said you're going to monitor when
9 rain -- rainfall events are forecast? Are you going
10 to do it after the rain, or before the rain falls?
11 It's not -- just not clear to me when you're going to
12 do it.
13 MR. BRADLEY SUMMERFIELD: Thanks.
14 Bradley Summerfield, with Environment and Climate
15 Change Canada.
16 That would be after the rainfall event
17 because what we're looking to see is the higher flow
18 event, is what we're -- so it could be freshet or it
19 could be rainfall. We're just looking for a
20 variability in flow conditions.
21 So after a significant rainfall event
22 you would expect higher flow conditions.
23 MS. SUNNY MUNROE: Thank you for your
24 answer. That's what I thought but that's now what you
25 have written there. Thank you.

(BRIEF PAUSE)

THE CHAIRPERSON: Questions from Board members?

(BRIEF PAUSE)

THE CHAIRPERSON: Thank you very much for your presentation.

(BRIEF PAUSE)

THE CHAIRPERSON: The next presentation is from the Government of the Northwest Territories.

(BRIEF PAUSE)

PRESENTATION BY GNWT:

MS. LORRAINE SEALE: Thank you, Madam Chair. My name's Lorraine Seale, with the Government of the Northwest Territories. And I have at the table here with me Monica Wendt, from Environment and Natural Resources. And we have on the phone, the same as yesterday, Rick Walbourne, with Environment and

Natural Resources. So just checking. Rick, can you hear us?

(BRIEF PAUSE)

MS. LORRAINE SEALE: Is he online? He should be online. We have -- I'll just -- we do have a very short presentation today, it's on watercourse crossings. And again, our recommendation is numbered according to our technical report.

(BRIEF PAUSE)

MS. MONICA WENDT: Hi, Rick. Are you there? Rick...?

(BRIEF PAUSE)

MS. MONICA WENDT: Let's hope that he --

MR. RICK WALBOURNE (BY PHONE): Sorry, I was on mute. Yes, I'm here.

MS. LORRAINE SEALE: I heard him

MS. MONICA WENDT: Hi, Rick. It's Monica. Are you listening?

1 MR. RICK WALBOURNE (BY PHONE): Yes, I
2 can hear you.
3 MS. MONICA WENDT: Okay. Thank you.
4 Thank you, Madam Chair. Here it's Monica, from GNWT
5 ENR.
6 So we have a short presentation
7 regarding watercourse crossings. And there was some
8 initial discussions during the environmental
9 assessment about monetary requirements for watercour -
10 - watercourse crossings along the road.
11 And as a result of Undertaking number 8
12 from the technical sessions, there's now a commitment
13 from Canadian Zinc to work with the stakeholders
14 during the regulatory process on crossings and
15 monetary requirements.
16 As noted by the Review Board on October
17 20th following the Second Round of Information
18 Requests, by turning -- by turning Undertaking number
19 8 into a commitment, Canadian Zinc has agreed to work
20 with Parks Canada and Environmental and Climate Change
21 Canada, and possibly also with the GNWT in
22 establishing appropriate water monitoring approaches.
23 This commitment will continue to be applicable in the
24 regulatory and permitting phases.
25 GNWT notes that this commitment -- that

1 this commitment is included in the Developer's October
2 2016 list of commitments. GNWT concurs that
3 monitoring of watercourse crossings during
4 construction and road operation should be required
5 during the regulatory phase which we outlined the
6 specific parameters and frequencies that are required.
7 GNWT will work with Canadian Zinc and
8 other stakeholders during the regulatory and
9 permitting phase as required. That leads --
10 THE CHAIRPERSON: Excuse me, but would
11 you be so kind to slow down? Our interpreters are
12 having a difficult time.
13 MS. MONICA WENDT: Sorry. Should I
14 repeat?
15 THE CHAIRPERSON: Interpreters, does
16 she need to repeat? Yes.
17 MS. MONICA WENDT: Okay. So I will
18 repeat the whole paragraph. GNWT concurs that
19 monitoring of watercourse crossings during
20 construction and road operations should be required
21 during the regulatory phase, which we've outlined the
22 specific parameters and frequencies that are required.
23 GNWT will work with Canadian Zinc and
24 other stakeholders during the regulatory and
25 permitting phases as required. This leads to our

1 recommendation number 9 from our technical report.
2 That's the establishment of a watercourse monitoring
3 program during -- during construction and road
4 operations. We missed the 'operations' word there,
5 sorry.
6 GNWT agrees that the specifics of this
7 monitoring can be discussed during the regulatory
8 phase. If all regulatory requirements and Developer's
9 commitment are ful -- fulfilled, the GNW -- in GNWT's
10 view, significant adverse impacts to relate to
11 watercourse crossings are unlikely.
12 GNWT agrees that the specifics of these
13 monitoring programs can be discussed during the
14 regulatory phase, but recommends that the Review Board
15 includes these commitments into the Report of
16 Environmental Assessment. Thank you.
17 MS. LORRAINE SEALE: Lorraine Seale,
18 GNWT. That concludes our presentation.
19
20 QUESTION PERIOD:
21 THE CHAIRPERSON: Okay. Thank you.
22 Questions to the presentations, Dehcho
23 First Nations?
24
25 (BRIEF PAUSE)

1 MS. CARRIE BRENEMAN: Carrie Breneman,
2 Dehcho First Nations. We have no questions.
3 THE CHAIRPERSON: Questions,
4 Environment and Climate Change Canada?
5 MR. BRADLEY SUMMERFIELD: Bradley
6 Summerfield, with Environment and Climate Change
7 Canada. We have no questions.
8 THE CHAIRPERSON: Questions, Fisheries
9 and Oceans Canada?
10 MS. VERONIQUE D'AMOURS GAUTHIER:
11 Thank you, Madam Chair. Veronique D'Amours Gauthier,
12 with Fisheries and Oceans Canada. We don't have any
13 question.
14 THE CHAIRPERSON: Questions,
15 Indigenous and Northern Affairs Canada?
16 MR. MIKE ROESCH: Mike Roesch, for
17 INAC. We have no questions. Thank you.
18 THE CHAIRPERSON: Questions, Liidlii
19 Kue First Nations?
20 MR. DEAN HOLMAN: Thank you, Madam
21 Chair. My question -- I -- I only have one (1)
22 questions, and it's rela -- relative to the invasive
23 alien species and then the control measures in place
24 of that.
25 Knowing that there will be a

1 significant amount of traffic from -- from the mine to
2 BC, and then BC into -- back into the Northwest
3 Territories, I'm wondering -- I'm wondering what
4 current protection measures there are in place in
5 terms of monitoring for invasive alien species, and my
6 under -- if the GNWT can clarify, or -- or the Board
7 can clarify who has that responsibility, and just to
8 state if there is any measures in place currently.
9 If there isn't measures in place
10 currently, I -- I think that that affects the
11 statement in terms of the -- the GNWT having no -- no,
12 I guess, recommendations or -- or concerns.
13
14 (BRIEF PAUSE)
15
16 MS. LORRAINE SEALE: Lorraine Seale,
17 GNWT. Could I request a clarification? Are -- is the
18 question about invasive vegetation species?
19 MR. DEAN HOLMAN: That's correct.
20 MS. LORRAINE SEALE: Lorraine Seale,
21 GNWT. Madam Chair, I propose that GNWT undertake to
22 file a response on that question, since the topic of
23 our slide today is watercourse crossings. And there
24 certainly are procedures in place, and in the
25 interests of a complete answer, it would -- I think

1 it'd be more efficient to file something in writing by
2 the undertaking deadline.
3 THE CHAIRPERSON: Legal counsel?
4 MR. JOHN DONIHEE: Thank you, Madam
5 Chair. That'll be Under -- Undertaking number 8.
6
7 --- UNDERTAKING NO. 8: GNWT to describe current
8 protection measures in
9 place to control invasive
10 species. Identify who is
11 responsible for invasive
12 species control
13
14 THE CHAIRPERSON: Questions, Dehcho
15 First Nations -- or, sorry, Liidlii Kue First Nations?
16 MR. DEAN HOLMAN: Thank you, Madam
17 Chair.
18 Just for a point of clarification, the
19 topics of discussion today included vegetation and not
20 -- and were not just restricted to watercourse
21 crossings. Again, my question still stands in terms
22 of it -- because this is related to watercourse
23 crossings and the safety of -- or potential impacts as
24 a result of invasive species into watercourse
25 crossings, and -- and in this particular one is the

1 most important.

2 MS. LORRAINE SEALE: Lorraine Seale,

3 GNWT. Thanks for the comment, and we'll incorporate

4 that in the undertaking response.

5 MR. DEAN HOLMAN: Thank you. Madam

6 Chair, Dean here. I have no more questions.

7 THE CHAIRPERSON: Questions from

8 Natural Resources Canada?

9 MS. VICTORIA THOMAS: Victoria Thomas,

10 with Natural Resources Canada. We have no questions,

11 thank you.

12 THE CHAIRPERSON: Questions from Parks

13 Canada?

14 MS. ALLISON STODDART: Allison

15 Stoddart, with Parks Canada. We have no questions.

16 THE CHAIRPERSON: Questions from

17 Canadian Zinc?

18 MR. DAVID HARPLEY: Dave Harpley. No

19 questions.

20 THE CHAIRPERSON: Why do I do that to

21 Nahanni Butte all the time? For heavens's sakes,

22 they're my cousins. How could I do that?

23 MR. GARTH WALLBRIDGE: Easy to forget

24 family. Garth Wallbridge, Nahanni Butte Dene Band.

25 We have no questions. Thank you.

1 THE CHAIRPERSON: Questions from
2 Review Board staff?
3 MS. KATE MANSFIELD: This is Kate
4 Mansfield. Review Board staff and counsel have no
5 questions.
6 THE CHAIRPERSON: Questions from Board
7 members? Thank you for your presentations.
8
9 (BRIEF PAUSE)
10
11 THE CHAIRPERSON: The next
12 presentation is from Dehcho First Nations.
13
14 PRESENTATION BY DEHCHO FIRST NATION:
15 MS. CARRIE BRENEMAN: Carrie Breneman.
16 Dehcho First Nations. Thank you. As you heard from
17 some of our comments today, we are concerned about
18 potish -- potential impacts to fish and fish habitat
19 resulting from the Sundog Creek realignment.
20 And I think some of our understanding
21 of the project has changed from today, and we're also
22 concerned with some of the issues around water
23 withdrawal, and we'll be looking to work with Canadian
24 and -- Zinc, and DFO regarding offsetting and water
25 withdrawal in some of these lakes in the Sundog Creek

1 realignment during the fith -- Fisheries auth --
2 authorization.
3 MS. DAHTI TSETSO: Yeah, this is Dahti
4 Tsetso, with Dehcho First Nations, and then just to
5 add as a -- kind of like as a concluding comment to
6 our questions from earlier today, just that Dehcho
7 First Nations would like to encourage the involvement
8 of community members in monitoring plans moving
9 forward in a manner that is meaning to their
10 involvement, and it builds local community capacity.
11 MS. CARRIE BRENEMAN: Any -- any
12 questions are welcome.
13
14 QUESTION PERIOD:
15 THE CHAIRPERSON: That's the end of
16 your presentation, then? Okay. Thank you.
17 Questions from Environment and Climate
18 Change Canada?
19 MR. BRADLEY SUMMERFIELD: Bradley
20 Summerfield, from Environment and Climate Change
21 Canada. We have no questions.
22 THE CHAIRPERSON: Questions from
23 Fisheries and Oceans?
24 MS. VERONIQUE D'AMOURS GAUTHIER:
25 Thank you, Madam Chair. Veronique D'Amours Gauthier,

1 with Fisheries and Oceans Canada. We don't have any
2 questions.
3 THE CHAIRPERSON: Questions from the
4 GNWT?
5 MS. LORRAINE SEALE: Lorraine Seale,
6 GNWT. We have no questions.
7 THE CHAIRPERSON: Questions from
8 Indigenous and Northern Affairs Canada?
9 MR. MIKE ROESCH: Mike Roesch, for
10 INAC. We have no questions. Thank you.
11 THE CHAIRPERSON: Questions from
12 Liidlii Kue First Nation?
13 MR. DEAN HOLMAN: Thank you, Madam
14 Chair. Dean Holman, from Liidlii First Nation.
15 We have no questions at this time,
16 however, support the recommendations on the
17 involvement of -- of the Dene communities in the
18 monitoring programs. Masi.
19 THE CHAIRPERSON: Questions from
20 Nahanni Butte Dene Band?
21 MR. GARTH WALLBRIDGE: Garth
22 Wallbridge, with Nahanni Butte Dene Band. No
23 questions. Thank you, Madam Chair.
24 THE CHAIRPERSON: Questions from
25 Natural Resource Canada?

1 MS. VICTORIA THOMAS: Victoria Thomas,
2 with Natural Resources Canada. We have no questions.
3 Thank you.
4 THE CHAIRPERSON: Questions from Parks
5 Canada?
6 MS. ALLISON STODDART: Allison
7 Stoddart, Parks Canada. We have no questions.
8 THE CHAIRPERSON: Questions from
9 Canadian Zinc?
10 MR. DAVID HARPLEY: Dave Harpley. No
11 questions.
12 THE CHAIRPERSON: Questions from Board
13 staff or counsel?
14 MS. KATE MANSFIELD: Kate Mansfield,
15 with the Review Board. We just have one (1) question
16 about the first point on your presentation there that
17 you have remain -- your concerns remain that there are
18 potential impacts to fish and fish habitat resulting
19 from the Sundog Creek realignment.
20 Could you please just elaborate on
21 specifically what impacts you are concerned about?
22
23 (BRIEF PAUSE)
24
25 MS. CARRIE BRENEMAN: Carrie Breneman,

1 Dehcho First Nations.

2 We have concerns about the viability of

3 the offsetting, and just that there's adequate

4 monitoring and adaptive management moving forward with

5 the offsetting program. And we just look forward to

6 more details that we can see on how that program's

7 going to work, and that there is -- there is kind of

8 an evidence to based to -- base to this project, and

9 that there's monitoring and basically adaptive

10 management moving forward.

11 MS. KATE MANSFIELD: Kate Mansfield.

12 Thank you. That's all of our questions.

13 THE CHAIRPERSON: Questions, from

14 Board members? David...?

15 MR. DAVID KRUTKO: David Krutko.

16 You mentioned briefly, I just caught

17 it. Do you have a monitoring program that you deliver

18 at the community level in regards to community-based

19 monitoring, or -- I'm not too clear on the Dehcho

20 process, so I'm just asking a question:

21 How -- how are you included in the

22 monitoring process in the region by way of I'm not too

23 sure it's in the Dehcho process or what type of

24 arrangement you have. Could you just clarify that?

25 MS. DAHTI TSETSO: Yes. This is Dahti

1 Tsetso, Dehcho First Nations.
2 So it's something that's outside the
3 Dehcho process. It -- it's something that was
4 initiated in the region through the Dehcho AAROM
5 program. And it began about ten (10) years ago, and
6 has since evolved to expand across the region.
7 And so within each of the Dehcho
8 communities, there are local community-based water
9 monitors who have received training and work with
10 various different research partners and -- and
11 government departments to do water monitoring within
12 the region. It's project by project.
13 And so what we're trying to suggest is
14 that there could be a role within that program for
15 community members from Nahanni Butte and LKFN to be
16 involved in monitoring of the all-season road line --
17 monitoring projects associated with the all-season
18 road.
19 MR. DAVID KRUTKO: David Krutko.
20 So what you're talking about is a
21 community-based monitoring program under the Mackenzie
22 basin type of a monitoring system. I know up in the
23 Delta, they do have similar arrangements in the
24 communities where it's community-based monitoring
25 where they train people to take the samples, do the

1 testing, and then -- so that's what we're talking
2 about.
3 So I'm just wondering is -- is there a
4 possibility of transiting that to be more involved
5 with the agencies such as Environment Canada and other
6 federal agencies to eventually set up a co-management
7 system so that it's integrated?
8 MS. DAHTI TSETSO: Yeah, that's --
9 kind of gets to the heart of the recommendations that
10 we're putting forward, that the -- the commun -- local
11 community water monitors could be more -- could be
12 involved in a clear way that's reflected in the plans,
13 so that way they -- they're meaningfully involved, and
14 the capacity is built as -- as the project proceeds.
15
16 (BRIEF PAUSE)
17
18 THE CHAIRPERSON: Board members?
19 Joe...?
20 MR. JOE HANDLEY: Joe Handley. Just a
21 question for clarification with regard to monitoring.
22 Is your concern only with the
23 realignment and the years immediately after it, or is
24 this ongoing monitoring for the life of the road? And
25 I guess the second part is that -- does your concern

1 regarding monitoring go beyond Sundog Creek
2 realignment?
3
4 (BRIEF PAUSE)
5
6 MS. DAHTI TSETSO: This is Dahti
7 Tsetso, with Dehcho First Nations.
8 It's -- we're having a little bit of
9 difficulty kind of just classifying our level of
10 concern, just because the monitoring plans aren't
11 fully flushed out yet. And so there -- the
12 perspective of the Regional Office is to ensure that
13 the all-season road proceeds in a manner that's --
14 that's not going to have negative impacts to the
15 environment or to the water, and to make sure that our
16 community members are involved in -- in those
17 monitoring plans moving forward.
18 So during construction, maintenance,
19 and post-operation, I -- I would suggest that we would
20 like to make sure that the environment is well
21 protected throughout that time.
22 But in terms of classifying our level
23 of concern right now, it's a little difficult without
24 those monitoring plans before us.
25 THE CHAIRPERSON: Questions from Board

members? There's a question from Liidlii Kue First Nations.

MR. DEAN HOLMAN: Madam Chair, if I may. I just want to maybe clarify a point that Dahti had made, and it's the -- it isn't the -- the initiative of the community-based monitoring program and its transition across the region is not only limited to water, it's the expansion of -- of the Dehcho AAROM project which was primarily focussed on water quality monitoring to monitoring in other areas of the Denendeh -- or Denendeh -- or Dene perspective.

That's the only thing that I had to say to clarify. Masi.

THE CHAIRPERSON: Okay. Thank you for your presentation. Masi.

(BRIEF PAUSE)

PUBLIC COMMENTS:

THE CHAIRPERSON: We have now completed our presentations for the day. And I would like to open the floor to public comments. At the back there was a sign-up page, and we had one (1) name on there, but I will still ask for public comments. Our first speaker is Raymond Michaud.

1 MR. RAY MICHAUD: Thank you. Raymond
2 Michaud. Speaking as an Elder, first off, I am not
3 employed by anybody, except the Federal Government,
4 which is called pensioned off. I have no monetary
5 gain from the contractor, government, or any other
6 body, so my comments are from the heart, from
7 experience.
8 Like I said yesterday, I had forty-one
9 (41) years of experience on winter road, but,
10 actually, if I include my youth, it's over fifty (50)
11 years, since 1966 when I first came up here.
12 What I want to bring up is -- hang on.
13 I need to grab my paper. First off, I -- I've spoken
14 to some of these departments wondering about some of
15 the recommendations. And they all said, Well,
16 Canadian Zinc agreed. Obviously they'd have to agree,
17 if they did not, the department would not approve the
18 road construction.
19 We have departments like Parks,
20 Environment Canada, Fisheries and Ocean, Government of
21 the Northwest Territories, Indigenous and Northern
22 Affairs of Canada, Parks Canada, Natural Resources
23 Canada, and the Board.
24 For those who are wondering why it's
25 taking so long, it's quite obvious. The thing is we

1 could eliminate every one (1) of these Boards since
2 Canadian Zinc has agreed to do their work, all of it.
3 They said Canadian Zinc agreed to monitor, to set up
4 gauges, to look at the fish. I'm surprised we're not
5 checking every rock for fossils because I guess that
6 department's not here.
7 My recommendation of some of these
8 programs for the purpose of research is rather
9 important, it goes under science. But the departments
10 involved, like, especially Fisheries and Ocean, should
11 be offering some monetary compensation to the mine so
12 they can hire numerous local people to do some of this
13 monitoring.
14 No problem having gauges set up. One
15 (1) of the monitors that do the road can go take a
16 look at the gauges and document it. No problem with
17 checking on fish. Someone can go look at the dry
18 creek bed and do a fish count. There's no problem
19 dealing with the plants. My only concern about the
20 endangered -- not the one -- the plants that aren't
21 from here, what happens if they're there now? Is
22 Canadian Zinc responsible to dig all these plants out?
23 Has anyone checked to see if they're already there
24 since the previous road?
25 So, speaking on behalf of Canadian

1 Zinc, meaning that if I was them, I'd be re -- really
2 frustrated, but they can't show it. Since I have
3 nothing to lose I can speak with they're -- they're
4 feeling.
5 I'll give you two (2) example how crazy
6 some of the departments can be. Ask yourself why do
7 we have bridges on the winter roads past Wrigley? Is
8 it because of the short season? The reason the
9 bridges are there is because prior to the bridge the
10 cro -- the trucks would have to cross the river, or
11 the creeks on ice.
12 And I say on ice, because departments
13 would not allow any dirt to be used on the road
14 crossing, or logs, or whatever, so it was straight
15 ice. Trucks wore chains. Obviously when they crossed
16 the ice bridge they would put mud on the bridge, on
17 the ice bridge, very minimal, but eventually Fisheries
18 would come along and they were fined, and fined big
19 time in the hundreds of thousands.
20 One (1) of the groups that was fined
21 was the Band of Wrigley. So they asked Fisheries, can
22 you come down in the spring and monitor this creek
23 that you told us we put a bit of dirt on it and tell
24 us how it affects the fish? Fisheries said they had
25 no money to do that. Wrigley said, Well you just took

a bunch off us, use some of that.

What they were trying to prove is every creek in the spring is full of mud from avalanches, from dirt erosion, from trees coming down, and I mean trees. Six (6) years ago the ferry had to close down because the trees were almost across the Liard River.

There's a lot of debris in the springtime or highwater level. So in actual fact, they were being penalized for dirt that had no effect on the fish population for obvious reasons of spring runoff. Sample number 1.

Sample number 2, later part in the season one (1) of the heavy equipment scraped a tree, I mean scraped. I don't think he killed it, just scraped it. But because it was over 6 inches wide they had to go and remediate the area by cutting down the tree and bucking it up, and making sure that it had been removed, because it had been damaged.

Once again, something extremely stupid, but it came from Environment. So when you allow these groups to go and monitor, or -- or give a company orders nowadays, because we have so many more, it becomes almost impossible to do any work. The mine wants to mine ore. They want to employ over two hundred (200) people, I believe, to do the mining.

1 They want to build a full-time road,
2 because they need it. Unfortunately we've surrounded
3 it by a park. They're doing everything in their power
4 to accommodate all of these department heads as best
5 as they can. But I'm -- I'm saying that the Board
6 should take serious consideration to advise these
7 governing departments that they should include some
8 monetary compensation to the mine to assist them,
9 which will assist employment of the -- the native
10 cultural people, especially like Nahanni Butte, to
11 hire more, to do the actual monitoring that these
12 departments are asking, not for the road, but a lot of
13 them are for scientific reasons, you know, like the
14 fish and lakes that they don't think exist.
15 So that would be one (1) of my
16 recommendation. Take it from an Elder. Take it from
17 someone who's seen how the government departments have
18 grown over the years to become sometimes idiotic, gun
19 control is a good example, imposed on territorial
20 people that hunt for a living, but that was imposed by
21 a -- a federal law. And a lot of these are federal
22 department heads.
23 So that's my recom -- my
24 recommendation. That's the best I can do. Masi.
25 THE CHAIRPERSON: Thank you.

(BRIEF PAUSE)

THE CHAIRPERSON: Public comments?

(BRIEF PAUSE)

THE CHAIRPERSON: Public comments?

MS. LORI ANN BERTRAND: Hello. My name -- I'm Lori Ann Bertrand. I'm from the Nahanni Butte Dene Band.

I'm just here to present what was written down at our band because we put up a poster for community members and young -- well, the youth in our community to write down their concerns and their opinions on the access road. And I have it here with me.

One (1) of the many things that -- that they put down on the paper was youth said employment and worry about the protection of the land. Building yourself up, building a team, moving forward in the community, taking back control over our land and resources, giving a better future for our people.

Building leaders, learning new things, hope for the future, and educate -- educating funding and scholarship for young -- for young adol -- adults.

1 Precautions taken into consideration, traditional
2 knowledge, skill, transparency, and making process --
3 progress in the community.
4 And we also -- the last one is, "We are
5 entitled to have a say in the process of the road."
6 So that was on the poster at our band.
7 And I would also like to share my personal opinion
8 about the meeting that's been happening this past
9 week. I still stand at 50 -- 50 percent about this,
10 but I -- I put trust into our band and to everyone's
11 decisions here.
12 And I had the opportunity to talk to a
13 lot of people that are in this room, and -- and I feel
14 very strongly about the great opportunities that will
15 be taking place into our community. But I also have
16 strong concerns also for the environment and
17 fisheries.
18 It's just mostly about the water, if --
19 if twenty (20) or fifteen (15) years from now, will it
20 be still fresh? Will it be contaminated? So those
21 are one (1) of the many things I have concerns for.
22 But also -- just give me a second.
23
24 (BRIEF PAUSE)
25

1 MS. LORI ANN BERTRAND: Where the road
2 is planning to be constructed, I also have concerns
3 about that area because that -- that area and also up
4 the river from our community are the areas that the
5 hunters in our community hunt.
6 So I'm just concerned about if the
7 moose would still be in that area where the roads will
8 be constructed, that's just a fifteen (15) to twenty
9 (20) years down the road thought. So I'm -- I'm
10 thinking way, way up ahead, and that's -- that's where
11 I'm standing right now.
12 But I still stand very strongly on the
13 other 50 percent that our community will grow stronger
14 and we will have a say with the road. And I know that
15 -- that the young men and women in my community are
16 willing to work together to build a good community.
17 And -- and I'm very fortunate to have
18 strong leaders and strong councillors and a very
19 strong Chief to be here to attend and also help me be
20 directed to the -- to where I want to be with my
21 community. So I'm very obliged to -- to be here, to
22 have a say, and to also present what the community had
23 to say. So thank you for listening.
24 THE CHAIRPERSON: Masi cho. Public
25 comments?

(BRIEF PAUSE)

THE CHAIRPERSON: Public comments?

(BRIEF PAUSE)

THE CHAIRPERSON: Final, public comments?

(BRIEF PAUSE)

THE CHAIRPERSON: Just before we close, I would like to make a statement that the Review Board received a letter from Rowe's Construction, and it'll be posted on the public registry. That's just for information.

Thank you for all your presentations today. That brings a close to the end of the day, so we're out a little bit earlier. Half an hour earlier from yesterday, I believe. So the weather is still nice and we'll see everybody back here tomorrow morning starting again at 8:30. Masi cho.

--- Upon adjourning at 4:35 p.m.

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7 _____
8 Robert Keelaghan, Mr.
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