

1
2
3
4
5
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8
9
10
11
12
13
14
15
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17
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MACKENZIE VALLEY ENVIRONMENTAL
IMPACT REVIEW BOARD

TALTSON HYDRO EXPANSION
IR SESSION

Facilitators:

Tawanis Testart	MVEIRB
Chuck Hubert	MVEIRB

HELD AT:

Yellowknife, NT
October 1, 2009
Day 1 of 3

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20		
21		
22		
23		
24		
25		

1	TABLE OF CONTENTS	
2		Page No.
3	List of Commitments	5
4		
5	Opening comments	9
6		
7	Question period	18
8		
9		
10	Certificate of Transcript	174
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

1	COMMITMENTS		
2	NO.	DESCRIPTION	PAGE NO.
3	1	Deze Energy commits that the work done	
4		with concrete will be carried out	
5		in dry conditions and won't contact	
6		any water bodies.	34
7	2	Deze Energy to provide in writing, by	
8		October 30th, 2009, rational and additional	
9		information on the specific life history	
10		movement characteristics of the fish	
11		species that may use the canal to support	
12		the three (3) assumptions presented in	
13		Section 15.3.2.8.1.5.	55
14	3	Deze Energy to provide in writing, by October	
15		30th, 2009, revised proposed mortality	
16		estimates presented in Section	
17		15.3.2.8.1.5	57
18	4	Deze Energy to provide in writing, by October	
19		30th, 2009, an assessment of the potential	
20		for downstream displacement or entrainment	
21		of fish during the operation of the Nonacho	
22		Lake control structure, as well as the	
23		requirement for fish passage for lake	
24		trout and/or other species	57
25			

1		COMMITMENTS (Con't)	
2	NO.	DESCRIPTION	PAGE NO.
3	5	Deze Energy to provide in writing, by October	
4		30th, an assessment of potential	
5		population level impacts and fish movement	
6		characteristics for lake trout, northern	
7		pike, and lake white fish in Nonacho Lake	59
8	6	Deze Energy to provide an assessment of	
9		impacts to overwintering fish in Tronka	
10		Chua Lake, due to reduced dissolved oxygen	
11		levels	61
12	7	Deze Energy to provide in writing, by October	
13		30th, a reassessment of the potential	
14		impacts to aquatic life using the cold	
15		water dissolved oxygen values presented	
16		in the CCME Guidelines	62
17	8	Deze Energy to write up commitment, prior	
18		to October 30th, for what they can do to	
19		verify the model for winter dissolved	
20		oxygen, and provide supporting evidence to	
21		the conclusion that the reduced flow	
22		expected during the winter season will be	
23		sufficient to uphold the concentration of	
24		dissolved oxygen, as prescribed in the CCME	
25		guidelines for cold water	64

1		COMMITMENTS (Con't)	
2	NO.	DESCRIPTION	PAGE NO.
3	9	Deze Energy to supply information about the	
4		wetland surveys illustrating the impacts	
5		or potential impacts to the project	72
6	10	Deze Energy to provide an assessment of the	
7		potential impacts to fish and benthic	
8		invertebrates should re-establishment of	
9		littoral zones not occur in the best case	
10		scenario of one (1) to three (3) years	75
11	11	Deze Energy to submit outcome of sidebar	
12		meeting, concerning additional information	
13		required to complete review of the DAR	82
14	12	Deze Energy to assess the possibility that	
15		higher flows in the winter will initiate	
16		early spawning by fish species that normally	
17		spawn in the spring, in correlation with the	
18		annual freshet	86
19	13	Deze Energy to provide draft monitoring	
20		frameworks for the Taltson River watershed,	
21		Trudel Creek, and canal construction, and	
22		canal operation	87
23			
24			
25			

1		COMMITMENTS (Con't)	
2	NO.	DESCRIPTION	PAGE NO.
3	14	Deze Energy to investigate the empirical	
4		values further to see if they have some	
5		information that they could make use of that.	
6		And if not, look at the other fish species	
7		that were used to see if there is a better	
8		empirical value that's more appropriate to	
9		lake trout	108
10	15	Deze Energy to explain why they feel	
11		sediment monitoring would be sufficient	113
12	16	Deze Energy to indicate how mortality	
13		estimates included both direct immediate	
14		mortality and indirect delayed mortality from	
15		injury	123
16	17	Deze Energy to provide calculations on the	
17		mortality on large fish and views on	
18		potential impact	131
19	18	Deze Energy to indicate whether or not going	
20		constantly across all thirteen (13) years	
21		the simulation was done (DAR report), these	
22		monthly target releases could lead to	
23		under-prediction of the variation in the	
24		level of the lake	147
25			

1		COMMITMENTS (Con't)	
2	NO.	DESCRIPTION	PAGE NO.
3	19	Deze Energy to provide in writing their	
4		predicted impacts that result from changes	
5		and fluctuations in ice level along the	
6		shoreline zone downstream, and how that	
7		will affect prey species that fish	
8		depend on	163
9	20	Deze Energy to provide in writing	
10		predictions on potential impacts to	
11		palatability of fish upriver and	
12		downriver, and what criteria is used	
13		when making that prediction	164
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

1 --- Upon commencing at 9:16 a.m.

2

3 MR. MARTIN HAEFELE: Good morning,
4 everybody. Winston Churchill once said a politician
5 needs stability to foretell what is going to happen
6 tomorrow, next week, next month, and next year, and to
7 have the ability to afterwards explain why it didn't
8 happen. And I think you could, you know, substitute EA
9 practitioner for -- for politician here, because in
10 general that's, you know, kind of how things tend to
11 happen. And in particular, I think it's also true for
12 people who try to organize the process of an
13 environmental assessment.

14 And you all probably at some point
15 expected to have written exchange of Information
16 Requests, as we had predicted, or foretold. But here we
17 are today, in a face to face meeting, and our Board's
18 decided, the Review decided not to have Information
19 Requests.

20 The reason for that is that some parties
21 found it very difficult to get them in on time, and the
22 Board had some difficulties wading through them and sort
23 of kind of making them their own, and after, you know,
24 meeting twice they decided that it would be better to
25 just get everybody in a room and have them talk directly

1 to each other and understand each other.

2 With that, welcome. My name is Martin
3 Haefele, I am the Manager of Environmental Assessment --
4 or Environmental Impact Assessment for the Review Board.
5 I have with me here Tawanis Testart, who is the lead EAO,
6 Environmental Assessment Officer, in -- for this file.

7 On my right here, Alan Ehrlich, is our
8 Senior Environmental Assessment Officer. Nicole Spencer,
9 who is another Environmental Assessment Officer, who is
10 going to help us out today. And Chuck Hubert who is our
11 newest Environmental Assessment Officer who we poached
12 from the Yukon. And in the back Wendy Warnock who is
13 going to be transcribing these sessions.

14 The reason we're here today, as I
15 mentioned is to replace the IR sessions. So the goal or
16 the purpose of this meeting today, tomorrow, and Monday,
17 is essentially to do the same thing that normally we
18 would get through -- through written exchange, and that
19 is to obtain additional relevant information that helps
20 the parties, that is you, to form your opinions and views
21 and conclusions about the proposed Deze Project, and then
22 in the end to help the Board to make its decision.

23 So the objectives really would be first of
24 all to make sure that when there is a question that we
25 all understand what the question is, I think that's quite

1 important. For some, hopefully we will immediate
2 answers; for some, I would think the answer might be a
3 little more complex than -- than we would want to, you
4 know, have the developer explain in five (5) or ten (10)
5 minutes.

6 So for those there will be time provided
7 for the developer or -- or of the parties if -- if
8 questions are directly to them, to submit a written
9 answer. But in the end, we -- we want to get the
10 information that is needed to assess the project. It may
11 not always be the information that we would like to have
12 but it's the information that we think we need.

13 So what I would ask people to do is, you
14 know, ask questions but stick to the scope of the
15 assessment. And I do have a copy of the terms of
16 reference here so if there's a conf -- if you're not sure
17 we can check it out. But I -- I would, you know, really
18 urge people to stick to the scope of the assessment, ask
19 the questions that we need -- that you think, you know,
20 the information that you need.

21 Tawanis here is going to lead you through
22 the nuts and bolts of -- of the project -- of the
23 sessions. I just want to close with a saying that I was
24 once told that without conflict there's no progress. So
25 by all means ask tough questions and just don't, you

1 know, take it too personal if you don't get the question
2 you want.

3 And I want to close with another quote
4 from Winston Churchill and that is:

5 "Courage is what it takes to stand up
6 and speak. Courage is also what it
7 takes to sit down and listen."

8 And over the next three (3) days I hope we
9 will have lots of that. And with that I'll hand it over
10 to Tawanis, who is going to be the person who is leading
11 us through this whole thing.

12 MS. TAWANIS TESTART: Good morning,
13 everyone. First of all I'd to -- I'd like to have the
14 courage to admit that we've printed off the wrong agendas
15 and put them at the front desk and so I apologize. We're
16 going to correct that over lunch and get you folks the
17 correct agendas, and in the meantime I'm going to -- I
18 have the correct agenda and I'm going to tell you what it
19 says.

20 We're going to start each day of these
21 three (3) days doing -- having opening remarks and doing
22 an overview. Today is the overview of how the sessions
23 will go. Tomorrow we'll do an overview of how today
24 went. And on Monday we'll do an overview of how Thursday
25 and Friday went.

1 And then today we're going to devote to
2 questions that relate to the potential impacts to the
3 Taltson watershed which is the first key line of inquiry,
4 as set out in the terms of reference and this morning
5 we're going to be focussing on questions coming from the
6 parties to this assessment.

7 As Martin said, the Review Board is not
8 issuing written IRs in this environmental assessment. So
9 this is the day that everyone will have the opportunity
10 to get the information they require to complete their
11 final submissions as we prepare for the Hearing at the
12 conclusion of this assessment.

13 After this agenda review I think we'll
14 start entertaining questions and then around 10:30, we'll
15 take a short break. From 10:45 till noon we'll continue
16 with questions from the parties, and then we're going to
17 have lunch which you'll have to leave the building to
18 acquire. So we'll reconvene here at 1:00/1:15 and
19 continue with questions from -- we're lucky enough to
20 have our internal experts here that have been advising
21 the Review Board on technical issues and they'll be
22 asking their questions to the developer at that time.
23 And we'll take another break at 3:00 and hopefully have
24 everything wrapped up by 4:30, quarter to 5:00.

25 This agenda is a skeleton overview of what

1 we hope to happen. Of course, as everyone knows when you
2 ask a question sometimes it leads to more questions so as
3 we're continuing through the day if people do have things
4 that they'd like to ask or they have an idea that they'd
5 like to get out, raise your hand and we're going to be
6 going around with microphones and we're going to be
7 maintaining a speaker's list, so that everyone can ask
8 their question in turn and that we can effectively
9 moderate this session.

10 We ask that you ask your questions to the
11 moderator so that the moderator can direct those
12 questions to Deze. That way we will be able to have a
13 little bit more control over timing and making sure
14 things sort of fall within the scope and things like
15 that.

16 And we ask also that people refrain from
17 giving presentations. We're here to ask questions and
18 get the information and we're very cognizant of the time
19 because we have a lot of stuff to get through over the
20 next three (3) days.

21 And also, if everyone could speak into the
22 microphone because we are recording this session and
23 we're also transcribing it and Wendy needs to hear you to
24 be able to write down what you said.

25 As I said, today we're going to focus on

1 the impacts to the Taltson watershed. Tomorrow in the
2 morning we're going to focus on the second key line of
3 inquiry which is impacts to the Trudel Creek and then
4 after lunch we'll be focussing on various subjects of
5 note mostly related to project design and socioeconomic
6 impacts.

7 And then on Day 3, in the morning we'll be
8 focussing on barren ground caribou and in the afternoon
9 we'll be talking about wildlife and traditional
10 activities such as traditional harvesting and cultural
11 impacts.

12 So, yes, we'll get correct agendas and put
13 them on the table for everyone after we break or at
14 lunch. And I guess -- oh, and I also want to mention
15 that we're going to be taking a tag team approach to
16 moderating so it won't always be me talking into this
17 microphone, so I'm happy about that.

18 Without further ado, I don't know if
19 anyone wants to volunteer to go first if they have all
20 their questions ready. I see parties sort of gathered in
21 that area and looking this way.

22 Oh, yes, why don't we do that? We'll just
23 do a quick go around the table. Sorry, I've been doing
24 meetings for Taltson for long enough that I think I know
25 everybody in this room and sometimes I forget that not

1 everyone knows everybody. So I'm Tawanis Testart. As
2 Martin said, I'm the environmental assessment that's
3 leading this file and maybe we could just go around and
4 introduce ourselves. They don't have a microphone so
5 they need to pass a microphone.

6 MS. NICOLA JOHNSON: Nicola Johnson, EA
7 analyst with Fisheries and Oceans.

8 MR. RICK GARVIS: Rick Garvias, habitat
9 engineer with Fisheries and Oceans.

10 MR. BRUCE HANNA: Bruce Hanna, habitat
11 biologist with Fisheries and Oceans.

12 MR. GAVIN MORE: Gavin More, Environment
13 and Natural Resources, GNWT.

14 MS. SOPHIA GARRICK: Sophia Garrick,
15 environmental officer, Transport Canada.

16 MS. CANDACE ROSS: Candace Ross with
17 INAC.

18 MS. STACEY LAMBERT: Stacey Lambert with
19 Environment Canada.

20 MS. BERTHA CATHOLIQUE: Bertha
21 Catholique.

22 MR. ALBERT BOUCHER: Albert Boucher,
23 from Lutsel K'e.

24 MR. PAUL SMITH: Paul Smith, Fort Res.

25 MR. ARCHIE CATHOLIQUE: Archie

1 Catholique, Lutsel K'e.

2 MR. LLOYD CARDINAL: Lloyd Cardinal, Fort
3 Res Metis Council.

4 MR. GEORGE MARLOWE: George Marlowe from
5 Lutsel K'e Elders and also Situna Park Working Group
6 (phonetic).

7 MR. DAMIAN PANAYI: Damian Panayi, a
8 wildlife biologist with Golder Associates, and I'm here
9 representing Deze Energy.

10 MR. ANDREW STEWART: Andrew Stewart, Deze
11 Energy.

12 MR. DON BALSILLIE: Don Balsillie, Deze
13 Energy, also representing the Akaitcho Territory
14 Government Chiefs of the Akaitcho Region.

15 MR. DAN GRABKE: Dan Grabke, managing
16 director of Deze.

17 MR. TOM VERNON: Tom Vernon, project
18 engineer for Deze.

19 MR. SHANE UREN: Shane Uren, I'm a
20 consultant for Deze.

21 MS. LINDA ZURKIRCHEN: Linda Zurkirchen,
22 I'm a consultant with Deze, working with Jane on the
23 environmental side.

24 MR. LOUIE AZZOLINI: My name is Louie
25 Azzolini, and I also am a consultant to Deze.

1 MR. RICHARD BROWN: Richard Brown with
2 DCS Incentives, working with the Board on environmental
3 and geotechnical issues.

4 MR. BRUCE STEWART: Bruce Stewart, I'm an
5 aquatic biologist advising the Board, as well.

6 MR. ALEKSEY NAUMOV: Aleksey Naumov, I'm
7 an environmental consultant, hydrology, with SENES. Yes.
8 Yes, and I'm advising the Board.

9 MS. TAWANIS TESTART: All right. Thank
10 you. While we were doing that, I managed to twist DFO's
11 arm into going first. So, if you want to give -- so
12 we'll just get started.

13

14 QUESTION PERIOD:

15 MR. BRUCE HANNA: Well, okay. Now I
16 guess what we'll do -- oh, sure. Yeah, it's Bruce Hanna,
17 DFO. And we can just go through our Information Requests
18 one by one. So if anyone needs any clarification just
19 let me know.

20 The first one we had asked was for Deze to
21 conduct an assessment of the adequacy of the minimum
22 flows prescribed in the existing water licence in
23 maintaining the ecological integrity of the aquatic
24 resources of the Taltson River. So that would be
25 basically at Nonacho and then down -- down at the dam.

1 MS. TAWANIS TESTART: All right. So that
2 question is directed to Deze and, Linda, you're going to
3 answer it?

4 MS. LINDA ZURKIRCHEN: Yes.

5 MS. TAWANIS TESTART: And just we're
6 going to paraphrase the questions as they're asked just
7 to make sure that, for the record, that we've understood
8 the question and that we've gotten all the salient
9 details correct, because this record is going to be a
10 body of evidence that's considered by the Board. So we
11 want to make absolutely sure that we understand what's
12 being asked.

13 And so the question directed to Deze is to
14 more fully assess, perhaps, the adequacy of the minimum
15 flows through the Taltson water shed from Nonacho Lake
16 down to the dam site and the adequacy of the minimum
17 flows to maintain habitat.

18 In the -- in the -- yes.

19 Sorry, Bruce just said that it's the
20 minimum flows as set out in the existing water licence.

21 MS. LINDA ZURKIRCHEN: So, you'd like my
22 name when we start answering too?

23 MS. TAWANIS TESTART: Oh, and, Linda,
24 just to remind you, that if you feel that it would take
25 too long to answer the question in this format, you can

1 always opt to answer it in writing at a later time.

2 MS. LINDA ZURKIRCHEN: Okay. Thanks. So
3 -- Linda Zurkirchen. So the question about the adequacy
4 of the existing permit limits. And the way we -- we do
5 feel it was addressed and it is addressed in the DAR, and
6 the way it's addressed is at Nonacho the -- the model
7 that we're using to release flows has based on the 3656
8 megawatt scenarios as -- as you're aware. And the 56
9 scenario basically maximizes the time that the project
10 could release a minimum flow.

11 So because there's only a limited amount
12 of storage in Nonacho, basically water in at some point
13 has to flow out and there is limited storage within under
14 a year's period, so that we could never take full
15 advantage -- the project could never take full advantage
16 of that minimum release flow. It already does in the 56
17 megawatt scenario.

18 So what we read in the DAR as the
19 analysis, the assessment of the environment under the 56
20 scenario is basically an assessment of the environment
21 under the permit limits, because we couldn't -- we
22 couldn't take more advantage of that permit limit, and
23 then with Twin Gorges, the Elsie Falls, just downstream
24 of Elsie Falls in the Taltson minimum release in the
25 existing permit.

1 The only time that the project would be
2 approaching or achieving that threshold is under a
3 ramping scenario for a few hours where turbines would
4 shut down and the bypass flow would be open to the 30
5 cubic metres maintaining that minimum release flow until
6 the waters are bypassed over the spillway through Trudel
7 and downstream which is I think -- depending on what the
8 flow scenario is, it could be -- I think we -- the DAR
9 mentioned up to twelve (12) hours that that minimum
10 release would be -- would be maintained at that until the
11 flows are redirected.

12 So those are the only two (2) sort of
13 scenarios where the permits -- the existing permit
14 minimums would be -- achieve is the wrong word, but would
15 be used.

16 And those are the only times -- and those
17 are both addressed in the DAR. So basically the -- the
18 question of, have we assessed the ecological integrity is
19 yes, under the 56 scenario and under the ramping
20 scenario.

21 MS. TAWANIS TESTART: First of all, I
22 just -- that's fine. I just wanted to let everyone know
23 that Bertha is translating in the back for Albert and so
24 if you could avoid using acronyms and speak clearly and
25 slowly, it would probably make her job a little bit

1 easier.

2 So now I'd like to ask CFO if -- if that
3 answer adequately answers the question for them or if
4 they would require more information.

5 MR. BRUCE HANNA: Bruce Hanna, DFO. I
6 think what's going to be the case with a lot of these
7 questions is we'd like to look at the response and have
8 time to digest it before we actually make a determination
9 whether that would adequately assess our needs.

10 MS. TAWANIS TESTART: Fair enough. Or
11 you could just say that you need more information for
12 everyone.

13 MR. BRUCE HANNA: Okay.

14 MS. LINDA ZURKIRCHEN: So can I just ask
15 -- can I -- can I ask a process question?

16 MS. TAWANIS TESTART: Yes.

17 MS. LINDA ZURKIRCHEN: So what -- just
18 understanding the process if that's a response, what
19 happens? Can we talk to DFO about this one-on-one and
20 figure out what's going -- you know, where -- where
21 you're -- if you still have concerns after you've
22 digested it and we can talk about that? Or would that
23 generate -- yeah, I guess, the next process.

24 What would be the next steps after this
25 kind of interaction?

1 MS. TAWANIS TESTART: Yes. We're going
2 to produce transcripts from these sessions very quickly.
3 And so after this session you can review the transcripts
4 and talk it over between the party and the developer and
5 have a meeting and come to an agreement.

6 And then we require that you report back
7 to the Board if you make any commitments or if, you know,
8 they tell you something that alleviates your concerns or
9 gives you the adequate information, report it back to the
10 Board so that we can put it -- advise the staff, so we
11 can put it on the record and it can be made public.

12 And right. Now, obviously at this, you
13 know, second, we're not going to require that DFO sign
14 off that they've, you know, satisfied all their
15 information requirements. We're going to need some time
16 to digest the information and to -- to understand what's
17 been said and then come back and decide whether we need
18 to give Deze direction to give more of a response or, you
19 know, have a sidebar meeting or what's going to happen.

20 Does that answer your question?

21 MS. LINDA ZURKIRCHEN: For the most part,
22 I think.

23 MS. TAWANIS TESTART: Hang on, Bruce.
24 Yes, and -- yeah. Alan is telling me to point out that
25 we always encourage parties to have sidebar meetings with

1 the developer, particularly if it's an issue that
2 pertains only to one (1) party, and then that way we can
3 get issues off the table and resolved within the
4 environmental assessment and have less outstanding issues
5 as we go into a hearing.

6 And all that we really need is to make
7 sure that those sidebar meetings are adequately reported
8 back to the Board so that we can be satisfied and we can
9 go to the Board satisfied that the issue has been dealt
10 with.

11 MR. BRUCE HANNA: Bruce Hanna, of DFO.
12 The one (1) question we have, I guess, is reporting back.
13 What sort of timeline do we have for that?

14 MS. TAWANIS TESTART: Well, we've given
15 until October 30th to the developer to provide written
16 responses to the IRs and so for sidebar meetings there's
17 not really a timeline as long as it happens before the
18 Hearing. But you can always have a sidebar meeting and
19 you can submit any information that the party deems
20 relevant at any time to staff for consideration.

21 MR. ALAN EHRLICH: Thanks. We're new to
22 having a technical session that deals with this kind of
23 structured questioning in lieu of a formal written
24 Information Request, so, you know, we beg your
25 indulgence, in terms of figuring out the details of the

1 process. But we want to make sure that people leave this
2 room with what they need.

3 Right now, Bruce, do you or does DFO still
4 consider this to be something that you need a response to
5 your request here in writing on?

6 MR. BRUCE HANNA: Bruce Hanna, DFO. I
7 think for this one in particular, it's just us wanting to
8 take a look at the response and -- and to think about it
9 a bit more. We also have a consultant involved in this.
10 So rather than say it meets our needs right away, we just
11 need a little bit of time.

12 MR. ALAN EHRLICH: So I didn't hear
13 you say you need a further response in writing. If you
14 do, go ahead and meet with Deze, which is strongly
15 encouraged, about this and you sort out this issue, will
16 you give us something in writing for the public registry
17 to point out that you guys are on the same page?

18 MR. BRUCE HANNA: Yeah, Bruce Hanna,
19 DFO. That's not a problem for us.

20 MR. ALAN EHRLICH: Wonderful. Thank you.

21 MS. TAWANIS TESTART: So, Bruce, do you
22 have a second question?

23 MR. BRUCE HANNA: Do we have a twenty-
24 fifth (25th) question?

25 The next one I guess, and just reading the

1 Information Request, Deze Energy provide a flow control
2 plan for the new Nonacho Dam underflow gates that allows
3 flow under the hydro expansion options to be routed via
4 the Tronka Chua Gap which will maintain flow rates that
5 are more consistent with existing flows?

6 We've also added, the plan should include
7 an assessment that demonstrates how the proposed flows
8 will mitigate potential impacts to fish and fish habitat
9 in Zone 2, the area downstream of the Gap, and eliminate
10 the need for a more detailed assessment of impacts within
11 Zone 2.

12 And I think basically the question boils
13 down to right now under certain expansion scenarios
14 there'll be a reduction in flow to -- to zero flow in
15 winter months on Tronka Chua Gap.

16 Is there any way to route some of the
17 water through that gap to maintain something more similar
18 to existing flows?

19 MS. LINDA ZURKIRCHEN: So, Linda --
20 sorry. So the question from DFO was whether or not Deze
21 Energy would consider diverting some of the water through
22 the Tronka Chua Gap to maintain -- to maintain the
23 existing flow pattern a bit closer to what it is now?

24 MR. BRUCE HANNA: Yes.

25 MS. LINDA ZURKIRCHEN: And if you're

1 wondering what we're doing, we're just pulling out the
2 original DFO requests so that -- so that the rest of us
3 can follow along.

4 MS. TAWANIS TESTART: While they're doing
5 that I'll just mention that the Information Requests as
6 they were submitted to the Review Board, we have some
7 copies of them that are on the front table if anyone
8 wants to follow along.

9

10 (BRIEF PAUSE)

11

12 MS. LINDA ZURKIRCHEN: Sorry about that.
13 Linda Zurkirchen. Yeah, with Tronka Chua Gap,
14 recognizing that the issue DFO has brought forward is
15 that under specifically the 56 flow scenario the winter
16 flows through Tronka Chua Gap near or at zero flow for
17 some months in the winter period which is not -- and
18 currently under the -- the current flow regime there is
19 some flows going through Tronka Chua year round, so we
20 recognize -- certainly recognize DFO's interest in that.

21 One (1) of the points that we'd like to
22 bring forward and have discussed before is -- is that
23 pre- the construction of the original Twin Gorges
24 facility, Tronka Chua Gap as a flow pattern did not
25 exist. So fortyish years ago there were no flows heading

1 over to Zone 2. Zone 2, sorry, is a -- I shouldn't say
2 Zone 2.

3 No flows are flowing through the Tronka
4 Chua Gap to -- to that watershed on that side which re-
5 enters the Taltson River upstream of the Twin Gorges
6 facility.

7 But we've also recognized that over the
8 last forty (40) years there have been flows going through
9 there and by such there is flows and water body and
10 potentially fish habitat -- fish habitat on -- in that
11 side of the channel.

12 So one thing to get to the point of your
13 question on the existing flows, what we have done in the
14 DAR is assessed the effects to fish and fish habitat in
15 that area which we have called Zone 2 because it's
16 identified as Zone 2 in the hydrological model.

17 And we have found that there would be no
18 significant affects based on the elevation change of the
19 water bodies on that side. Primarily there's two (2)
20 lakes, Tronka Chua Lake and I think it's pronounced
21 Thekulthili Lake.

22 Also recognizing that there is a larger
23 change in Tronka Chua Lake than there would be in
24 Thekulthili Lake because of additional flows that come
25 into that system uncontrolled between those two (2) water

1 bodies.

2 We do recognize that we have limited
3 existing environmental data on that side and have
4 identified that as one of the areas that we feel we
5 should be picking up some additional data in the Tronka
6 Chua Lake area to assist with a future monitoring program
7 going forward so that we could monitor the predictions of
8 our effects.

9 At the same time the model that we have
10 will be updated over time as we have two (2) new flow
11 stations approximately a year, year and a half that have
12 gone in to the system to help with the model, one (1) up
13 Nonacho Lake, upstream of Nonacho Lake, and the other at
14 the -- pardon -- Porter Lake. The other at the Tazin
15 River which doesn't affect the -- this Zone 2 that we're
16 speaking of but it does affect the basic model in that
17 it'll enable us to help tune and make more accurate the
18 model.

19 So that is one of the features that we'd
20 also be -- be looking at over time in helping to identify
21 the flows and identify -- keep modelling the predictions
22 and doing monitoring program on those predictions, as
23 well as picking up additional information to
24 preconstruction to help with the -- or to compile the
25 monitoring program and measure the predictions.

1 MR. BRUCE HANNA: Bruce Hanna, DFO.
2 Again, it's something we'll have to consider but the one
3 question I would have that I don't think was addressed
4 was -- is it actually possible to reroute some of the
5 water through Tronka Chua Gap in the 56 megawatt
6 expansion, just whether it's a possibility or not?

7 MR. TOM VERNON: Tom Vernon. The short
8 answer is, yes, Bruce. We -- we've not -- I take your
9 point. You can release water from Tronka Chua only by
10 holding the lake elevation high. It's an unregulated gap
11 there.

12 We've not studied whether there's
13 potential to -- to negate a system at -- at the main
14 outlet to help in that. It -- it could be something we
15 can look at but realizing that in the -- in both of the
16 expansion scenarios the lake would in the late winter
17 drop below the sill and -- of Tronka Chua. That would
18 require alterations at Tronka Chua and we've not
19 currently proposed any changes there.

20 We'd like to leave that alone but
21 technically that keeping water going in Tronka Chua is --
22 is possible with -- with, you know, further excavations
23 and possibly a regulation structure.

24 MS. TAWANIS TESTART: So, Bruce, I think
25 that the -- to sum up that answer, it's possible but the

1 Deze Corporation has not really looked at what the
2 requirements would be to create that situation.

3 Is that something DFO would require --
4 would like more information on or would you like them to
5 look at that further?

6 You don't have to answer right now. Maybe
7 think about it and --

8 MR. BRUCE HANNA: No, I think for -- for
9 us -- it's Bruce Hanna, DFO. If we are restricting flow
10 that's going there right now, there could potentially be
11 impacts. It would be a matter of comparing those impacts
12 to the benefits of actually doing some work at Tronka
13 Chua Gap. So it is something we can look at. It'd be
14 the focus of another sidebar discussion, I think.

15 MS. TAWANIS TESTART: Okay, so I think
16 that we'll think about that question a little bit more
17 and maybe do a little bit of internal dialogue about
18 whether we want the developer to provide more information
19 on what the various options would be and you guys can
20 organize a sidebar conversation about it. Is that good?

21 MR. TOM VERNON: Tawanis, I -- I rather
22 doubt we could deliver that kind of answer by October
23 30th or if that -- if that was the deadline. Sorry, Tom
24 Vernon.

25 MS. TAWANIS TESTART: Noted. Question 3?

1 MR. BRUCE HANNA: Bruce Hanna, DFO. I
2 actually think I have a couple that can be answered with
3 "yes" or "nos".

4 One (1), confirm that all concrete work
5 for the construction of the Taltson project will be
6 isolated from any water body or water course, that is the
7 work is completed in the dry.

8 MS. TAWANIS TESTART: This is a question
9 for Deze Energy. DFO is asking whether the concrete work
10 would be isolated from the natural water flows in the
11 environment and this question relates to contamination of
12 water through the materials used in creating concrete and
13 I just want to note that I think Environment Canada had a
14 similar Information Request.

15 MR. TOM VERNON: Tom Vernon. Yes, that's
16 entirely possible. The -- the structures, I guess the
17 key structures that one has to be careful about, we -- we
18 do have a sill going in on the -- the current spillway at
19 Nonacho Lake. The plan would be to draw the lake down to
20 just below that sill, carry that work out in the dry in
21 the early spring.

22 The rest of the structures are isolated.
23 They're in inset. They're all constructed in the dry.
24 The powerhouse you can see on the model is in a -- is in
25 a pit but -- and obviously there'll be some water getting

1 in -- in there but, like the canal and other structures,
2 it's isolated by rock plugs from any of the rivers or
3 water courses until we're all finished structural work
4 and any water that enters those excavations obviously is
5 going to get pumped out and -- and into the treatment
6 system.

7 So I think that the answer to your
8 question and concerns on concrete and exposure of -- of
9 concrete to surface water is -- is -- that's entirely
10 feasible to control that.

11 MR. BRUCE HANNA: Thank you.

12 MS. TAWANIS TESTART: Just to clarify,
13 does this mean that Deze Energy is prepared to make a
14 commitment that the concrete materials will be -- and the
15 work done with concrete will be carried out in dry
16 conditions and won't contact any water bodies?

17 MR. TOM VERNON: Yes, I think we can make
18 that commitment.

19

20 --- COMMITMENT NO. 1: Deze Energy commits that the
21 work done with concrete will
22 be carried out in dry
23 conditions and won't contact
24 any water bodies.

25

1 MS. TAWANIS TESTART: And I'm just going
2 to ask Environment Canada if they have any further
3 questions on the subject.

4 MS. STACEY LAMBERT: Stacey Lambert,
5 Environment Canada. There's a commitment that was made
6 that states:

7 "When concrete works cannot be
8 completed in the dry sites specific
9 operational management plans will be
10 developed with the contractor and
11 submitted to DFO prior to completing
12 the works."

13 Can EC be included in this review?

14 MS. LINDA ZURKIRCHEN: Linda Zurk --

15 MS. TAWANIS TESTART: Sorry, I'm trying
16 to maintain control. Environment Canada is asking to
17 Deze Energy if they can be included in any review of
18 management plans related to this topic.

19 MS. LINDA ZURKIRCHEN: Yes.

20 MS. TAWANIS TESTART: So Deze Energy is
21 committing to including Environment Canada in their
22 review of their management plans. Does that satisfy
23 your needs?

24 MS. STACEY LAMBERT: Yes, that satisfies
25 that question. I've a couple other questions I'd like to

1 ask, too.

2 MS. TAWANIS TESTART: Are they related to
3 this topic?

4 MS. STACEY LAMBERT: Yes.

5 MS. TAWANIS TESTART: Okay.

6 MS. STACEY LAMBERT: Okay. Are the
7 settling ponds proposed to be used to collect the fluid
8 and wash water from both of the concrete batch plants?
9 If so, what treatment and water monitoring is planned
10 before the wash water effluent is released to a water
11 body to ensure the effluent will not be deleterious and
12 what are the settling ponds -- where are the settling
13 ponds to be located?

14 MS. TAWANIS TESTART: Environment Canada
15 has asked to Deze Energy whether settling ponds will be
16 used to collect the effluent and wash water from the
17 concrete batch plants, and where those settling ponds
18 will be located, and what treatment is planned for those
19 settling ponds to ensure that any effluent released to a
20 water body is not deleterious or harmful to that water
21 body.

22 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
23 These -- these -- yes, there will be settling ponds and
24 the settling ponds will be developed during the detail
25 design stage. That's part of the final design

1 engineering component that's completed pre -- during the
2 regulatory preconstruction phase.

3 With the water quality there's -- there
4 definitely will be a water quality -- the water coming
5 out of the settling ponds that may have been in contact
6 with the concrete or other works will be tested for
7 typical parameters that it may be contaminated by
8 critical ones, being the pH limits or the pH of water
9 coming into contact with concrete and/or sediment.

10 And typically if the water quality meets
11 discharge criteria without treatment, it won't be treated
12 but it will be tested and if it needs treatment, there's
13 different treatment options available and we can
14 certainly provide those during the detailed design stage.

15 It does come back to the size and the
16 configuration of the settling ponds but there are some
17 standard treatment options. With pH and concrete water
18 it can settle for about 24 hours and it quite often
19 neutralizes.

20 And there are some established guidelines
21 and DFO has established guidelines about concrete waste
22 water management. As well, with sedimentation, settling
23 ponds work very well but there's also other flocculents
24 and things that could be added, if necessary.

25 MS. TAWANIS TESTART: Thank you. Does

1 that satisfy Environment Canada?

2 MS. STACEY LAMBERT: I -- I'll take it
3 back to our expert.

4 MS. TAWANIS TESTART: All right. Just to
5 clarify, Linda, when you -- you said the settling ponds -
6 - the final locations of the settling ponds will be
7 something determined during the regulatory phase. But
8 for the record and the transcript could you just clarify
9 where the settling ponds will be used in terms of -- of
10 the construction activities.

11 Will it only be at the Taltson dam site?
12 Will there also be settling ponds or other gathering
13 points in other construction camps or sites?

14 MR. TOM VERNON: Tom Vernon. Yeah, I
15 think the construction works are fairly widespread so
16 there'll be a number of settling ponds required, probably
17 one (1) down near the powerhouse excavation, likely one
18 (1) to handle the canal, certainly one (1) near the batch
19 plant. The batch plant location hasn't been finalized
20 yet and would be actually something that probably only
21 gets finalized when a particular contractor is -- is
22 developing his -- his plans.

23 There would be a settling facility at
24 Nonacho Lake for sure for a concrete batch plant and
25 canal excavation, as well, so a number of them, yes.

1 MS. TAWANIS TESTART: Thank you. In
2 general because this project is occurring on a very, very
3 large area, if you could clarify when asked for specific
4 locations in general.

5 We're not asking you, you know, which
6 patch of ground within the nearest hundred inches are you
7 going to put this, but will it be at Nonacho, will it be
8 at the dam site, will it be something in the transmission
9 line or -- and I think that would be helpful for parties.

10 Do you have more questions related to the
11 concrete question? Okay. So I -- I'm going to ask DFO
12 to go to question 4.

13 MR. BRUCE HANNA: Bruce Hanna, DFO again.
14 Please identify the source of the standard operating
15 procedures that relate to issues surrounding erosion and
16 sedimentation that was used in the development of the
17 erosion and sediment control plan or where intended to be
18 used in the implementation of the plan during
19 construction.

20 MS. TAWANIS TESTART: So DFO has asked
21 Deze Energy -- I'm sorry, you're going to have to repeat
22 that for me, Bruce.

23 MR. BRUCE HANNA: Bruce Hanna, DFO.
24 There was standard operating procedures surrounding
25 erosion and sedimentation that were referred to. We're

1 just looking for what the actual document was.

2 MS. TAWANIS TESTART: DFO has asked that
3 you identified the document that you're referring to when
4 -- in the DAR -- or the developer's assessment report you
5 had mentioned standard operating procedures for sediments
6 and erosion control, sedimentation and erosion.

7 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
8 I believe the term "standard operating procedures" may
9 have been not the correct term to use in the DAR. We
10 probably should've used "best management practices,"
11 being that we recognize there are no standards -- or I
12 shouldn't say there are no, but there are -- I -- we have
13 not found any established Canadian standards for sediment
14 erosion control but there's a number of accepted best
15 management practices that -- or guidelines that are used.
16 Different government agencies around Canada have
17 established those and they are generally contained in a
18 environmental management plan, which they will be
19 contained in the environmental management plan that Deze
20 will put forth.

21 So the terminology would -- that would
22 better reflect what was written in the DAR would be "best
23 management practices," as opposed to standards.

24 MR. BRUCE HANNA: Bruce Hanna. Just to
25 clarify, so is there a document? It looked like it was a

1 reference anyway, so whether it's best management
2 practices or otherwise, or was it a compilation of
3 measures from other sources?

4 MS. LINDA ZURKIRCHEN: I don't know
5 offhand. It may have been a compilation of sources. I
6 believe the provincial government -- the BC provincial
7 government has a guideline for sediment and erosion
8 control. I can look into that. But it's in their best
9 management practices for in-stream-works guideline
10 document. I can forward that on. There's -- but it may
11 have been a compilation of -- of other general guidelines
12 that are readily available from different sources.

13 MR. BRUCE HANNA: Thank you.

14 MS. TAWANIS TESTART: Linda, when you say
15 the environmental management plan, the Deze -- can you
16 clarify what you mean?

17 MS. LINDA ZURKIRCHEN: Yes. And I think
18 we -- I thought we referred to that earlier today
19 already, but Deze has an environmental management plan.
20 It is in the -- the outline of it is in chapter 7 of the
21 DAR. And I believe -- pardon?

22 No, management plans, environmental
23 management plans. And I believe in there, there is a
24 sediment and erosion control management plan, basically a
25 toolbox at this time, because depending on the actual --

1 again, getting into the detailed design of -- of --
2 depending on the actual location of some of these works,
3 it ties into things like the settling ponds, those kind
4 of needs. So those are the environmental management plan
5 details are tied together with detailed design as to
6 where the -- where the sites are that need the different
7 kind of tools applied to them.

8 MS. TAWANIS TESTART: Thank you. DFO,
9 are you satisfied with the answer to your question? Just
10 kind of a "yes" or "no."

11 MR. BRUCE HANNA: Yes.

12 MS. TAWANIS TESTART: Yes.

13 MR. BRUCE HANNA: Or no. Bruce Hanna,
14 DFO. And I realize a lot of these questions are probably
15 more suited to a written response or sidebar meetings.
16 So feel free to do that just to save time, I guess. But
17 I'll ask them anyway.

18 MS. TAWANIS TESTART: You have to ask
19 them so that we can get them on the record.

20 MR. BRUCE HANNA: The next one was:
21 Complete an assessment of impacts to lake trout as a
22 result of the lowering of the water level in Nonacho Lake
23 necessary for the completion of in-water works on the
24 control structure. This assessment should include a
25 description of mitigation measures that will be

1 implemented to prevent impacts to spawning or incubating
2 eggs.

3 MS. TAWANIS TESTART: Directed to Deze
4 Energy, DFO is asking for an assessment of effects to
5 lake trout due to lowering of water levels, and proposed
6 mitigation to lessen those effects.

7 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
8 Yeah, what -- just to understand, for everyone, the issue
9 is that there was a one (1) time draw down of Nonacho
10 Lake during construction to enable concrete works to and
11 construction works at the facilities to be undertaken in
12 the dry, basically. That's the easiest, most logical,
13 most feasible way to ensure that works can be conducted
14 in the dry.

15 The draw down occurs in -- is scheduled to
16 occur in the fall and it's a slow process because there's
17 only -- because of the existing control structures on the
18 facility now can only release a -- a certain quantity, a
19 maximum quantity of water, and there's still water coming
20 into Nonacho. So it will take over months, two (2)
21 months approximately, to draw down the lake of
22 approximately 0.8 metres.

23 So during that time frame the question
24 that DFO posed is that -- that it would -- fall spawners,
25 particularly lake trout be impacted by this draw down.

1 In response to that, lake trout are
2 typically a deeper water spawning fish. That is part of
3 their process of a fall spawner being able to have the
4 eggs incubate over winter, in that if they were a shallow
5 water fish there is in our last couple of sessions of ice
6 monitoring on Nonacho Lake, there's about a metre of ice
7 over winter there, so there is definitely protection.
8 Fish that have eggs over winter will typically spawn at
9 depths to have the protection of their eggs over winter.

10 From our -- from our literature reviews
11 that the lake whitefish -- sorry, lake trout spawn in
12 depths of .12 metres down to depths of 55 metres.

13 In speaking with other specialists in this
14 matter, the documented northern spawning of lake trout in
15 shallow locations is typically on habitat that is
16 preferable for them, is non-vegetated, gravelly, rocky
17 substrates.

18 And the substrate -- the shallow bench
19 habitat in Nonacho Lake is typically quite silty and
20 vegetated or high in organics and vegetated. Realizing
21 that Nonacho Lake has been brought up in the last forty
22 (40) years by a couple of metres during the initial Twin
23 Gorges construction, so it -- what happened is the lake
24 inundated some wetland or terrestrial habitat and those
25 benches are typically -- that exist now that are under

1 water in the shallow areas are typically well vegetated
2 and don't provide good preferable habitat to Lake Trout
3 spawners.

4 So the lack of preferable habitat coupled
5 with that they are also deep water spawners mitigate a
6 lot of -- naturally mitigate -- you know, there's sort of
7 cause and effect that we're mitigating construction works
8 and in-stream works by drawing down the water.

9 And there is a potential for a small
10 effect on lake trout if there was spawning habitat
11 preferable to them in a shallow habitat which are both
12 low risk items or low potential, I should say, items.

13 Coupled with that, typically we do have a
14 bit of -- and the -- the hydrograph right now, there is a
15 bit of a draw down naturally that occurs or a lowering of
16 the water elevation during that time period. It would be
17 exasperated a bit this one time event during
18 construction, but it is in part to mitigate the effects
19 in another location.

20 MS. TAWANIS TESTART: Bruce, so you've
21 asked for further assessment of the potential impacts to
22 lake trout under these conditions and Linda's given you a
23 bit of an answer.

24 And I think I'm going to say that the two
25 (2) of you should have a sidebar meeting to determine

1 whether that -- that's adequate for your -- your needs.

2 So that makes sense?

3 MR. BRUCE HANNA: Bruce Hanna, DFO. No I
4 think it would definitely take a sidebar meeting. We
5 have had some information from one of our lake trout
6 specialists that, on Nonacho Lake, it could -- they could
7 be spawning in less than 1 metre and in the north we have
8 realized that they often spawn in areas that aren't
9 typical of spawning in southern locations.

10 We think it's very important to determine
11 where the lake trout are spawning in Nonacho Lake so we
12 can properly mitigate those impacts whether it's by
13 timing the draw down or what have you.

14 But it could definitely -- it'll
15 definitely be a sidebar discussion.

16 MS. TAWANIS TESTART: Excellent. So with
17 that understanding, Deze has agreed to have a -- a
18 sidebar meeting with DFO related to the spawning, the
19 effects on spawning of lake trout in that -- yes.

20 What are we on, 7 or 8?

21 MR. BRUCE HANNA: For us it's 4 but it
22 has 7 parts.

23 MS. TAWANIS TESTART: Go ahead.

24 MR. BRUCE HANNA: Bruce Hanna, DFO. We'd
25 asked that Section 15.3.2.6 of the DAR was revised to

1 include common mitigation techniques available to prevent
2 the entrainment and mortality of fish at hydro electric
3 facilities.

4 I guess that could be answered just by
5 saying that it would be revised?

6 MS. TAWANIS TESTART: DFO is asking Deze
7 Energy if they would commit to -- I -- I think you're
8 asking them for a commitment to use commonly used
9 mitigation techniques to prevent entrainment.

10 MR. BRUCE HANNA: Just to include them.
11 I guess it was lacking in that section so it was just
12 adding mitigation techniques.

13 MS. TAWANIS TESTART: Would you like to
14 respond?

15 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
16 There is one (1) of the entrainment techniques that was
17 not written into the DAR that does exist in the design is
18 a screen across the pen stocks. It's not a fine mesh.
19 It's typical of a mesh screen for that design of a power
20 project such as this, typically used for material, trash,
21 other things that come down, trash -- referred to as
22 "trash racks" or similar but also used in design to help
23 mitigate adult fish from moving into the turbines.

24 Aside from that we, for various reasons
25 that I think in -- in lieu of time we probably won't go

1 into at this time but there actually are not a lot of
2 common -- from our research, which we've done a fair bit
3 of over the last few weeks, last couple of months --
4 there are no what I would refer to as common mitigation
5 techniques available that work well for species to avoid
6 entrainments and certainly looking at the species we have
7 and what we're trying to do or what would be trying to do
8 there in that there's no new quantity of water leaving
9 the system. The quantity of water is the same as there
10 is now and the -- the water is leaving over the spillway
11 and/or going through the existing Tronka Chua or, sorry,
12 the existing Twin Gorges facility.

13 Adding the expansion facility to that will
14 remove water from going over the spillway so that there's
15 still the same amount of water leaving the system. And
16 if fish are going to be moving into a discharge facility
17 from the Forebay, there's no reason to believe that they
18 would be -- this project would be increasing the
19 discharge of fish from that -- from the Forebay because
20 the quantity of water is the same.

21 So for that reason and for a number of
22 reasons we've talked about previously, the non-migratory
23 nature of these fish that even pre-Twin Gorges there was
24 not a migratory -- clear migratory channel being that
25 they'd go through the Elsie Falls and -- and there was no

1 upstream migration happening through that area as far
2 we're aware of because of the -- the physical features of
3 that area and that we're not creating anything new in
4 that system in terms of increasing the discharge
5 quantity, that we don't feel that additional mitigation
6 technique is required.

7 But I think there's room for discussion on
8 that and, well, I think there will be discussion on that
9 on a sidebar meeting, I would assume.

10 And we are -- we -- I can say yes, we will
11 have a sidebar meeting to that to pre-answer that
12 question.

13 MS. TAWANIS TESTART: So Deze has
14 responded by saying they have not identified any common
15 mitigation techniques that would prevent entrainment and
16 that they are of the opinion that mitigation is not
17 required. Does that satisfy DFO?

18 MR. BRUCE HANNA: Bruce Hanna, DFO. I
19 think there -- there were certain things you were doing
20 to prevent entrainment so I don't know if it's accurate
21 to say you haven't -- you don't have any mitigation
22 techniques. There are some and we'll discuss others I
23 guess.

24 MS. LINDA ZURKIRCHEN: Yes, so are you
25 saying the ones we have discussed are not clearly

1 identified in the DAR, the ones that we put forth
2 already?

3 MR. BRUCE HANNA: No, it was -- it was
4 just I think the way Tawanis had summarized it was that
5 you haven't identified any, but --

6 MS. TAWANIS TESTART: No, sorry, I should
7 have said that they haven't identified any commonly used
8 --

9 MS. LINDA ZURKIRCHEN: Any additional
10 ones. Maybe we'll clarify. We haven't identified --

11 MS. TAWANIS TESTART: Additional.

12 MS. LINDA ZURKIRCHEN: -- any additional
13 ones that aren't already identified in the DAR except for
14 the screen that has always been in the design that was
15 not written into the DAR as being in the design.

16 MS. TAWANIS TESTART: All right. So then
17 we need to clearly say for the transcript that you will
18 be screening the pen stock in the project design as
19 planned?

20 MS. LINDA ZURKIRCHEN: Yes.

21 MS. TAWANIS TESTART: Excellent.

22 MR. BRUCE HANNA: Bruce Hanna, DFO.
23 We've asked for examples to be provided of hydro projects
24 where intake canals were designed to be unsuitable as
25 fish habitat and not screened as a measure to prevent

1 fish from entering hydro turbines and assess if these
2 were successful in preventing fish entrainment.

3 MS. TAWANIS TESTART: DFO's question to
4 Deze is that they provide examples of other hydro
5 projects where the intake canals were designed to be
6 unsuitable fish habitat as opposed to being screened.

7 MS. LINDA ZURKIRCHEN: Oh, I -- I think
8 we identified that in part in our first discussion that
9 there is a screen across the end of the intake canal near
10 the pen stocks, which was, I believe, mentioned
11 previously not identified in the DAR and that we are not
12 aware of any other projects that have intake canals such
13 as this one that we were able to identify, in -- in terms
14 of the big bedrock, the same parameters that -- design
15 parameters that this project has, and in terms of the
16 similarities between the fish species and the -- the 1
17 kilometre long channel structure.

18 MR. BRUCE HANNA: Bruce Hanna, DFO. I
19 guess I could flip that around and are there any
20 situations that you've seen where other -- like, where
21 the intake canal was screened or something else was used?

22 MS. TAWANIS TESTART: Yes. Go ahead.

23 MS. LINDA ZURKIRCHEN: From -- from what
24 we -- our research that we've done, no, there -- there
25 isn't much else out there and for -- in terms -- for

1 screening purposes, no, they haven't noticed any that
2 screen the intake canal for fish entrainment purposes.

3 And from the research we've done, the
4 additional -- any additional mitigation purposes such as,
5 acoustics or electronics, bubble curtains, various
6 techniques, they mentioned those are the ones we've
7 looked at, and from a literature perspective that -- and
8 we can go into detail on this on the sidebar that aren't
9 -- we don't feel would be applicable for this project.

10 MS. TAWANIS TESTART: Do you have
11 further questions? Or is that -- but that's at a sidebar
12 meeting that you're gonna have?

13 MR. BRUCE HANNA: No, that -- that's fine
14 for the sidebar. We do have further questions because--

15 MS. TAWANIS TESTART: I just meant on
16 this specific --

17 MR. BRUCE HANNA: Yeah.

18 MS. TAWANIS TESTART: -- this specific
19 question that you've asked.

20 MS. BRUCE HANNA: No, that's fine. And
21 I'm not sure if there's any way you want us to speed this
22 up because we are very inquisitive people at DFO and have
23 lots of questions.

24 MS. TAWANIS TESTART: No, it's fine.
25 I'd just like to reiterate that if anyone wants to ask a

1 question that's related to something DFO's talking about,
2 just raise your hand and we'll make sure that you get in
3 there.

4 MR. BRUCE HANNA: Okay. The next ones, I
5 believe, are going to be probably written submissions,
6 but I'll -- I'll ask them.

7 First, provide an assessment of population
8 level effects on fish stocks in the Forebay due to
9 entrainment or displacement of fish downstream of the
10 Twin Gorges Facility. These population level effects
11 should be included in the analysis of the magnitude of
12 effect.

13 MS. TAWANIS TESTART: It's a question
14 directed to Deze Corporation, Deze Energy, and DFO is
15 asking that you provide an assessment of population level
16 effects on fish stocks in the Forebay due to entrainment
17 or displacement of fish downstream. And included in that
18 assessment is a discussion of magnitude -- sorry, of --
19 yes, magnitude of the effect.

20 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
21 We don't believe there would be any change to the
22 upstream populations, populations in the Forebay,
23 primarily because we're not discharging any new water out
24 of the Forebay. It's the same quantity of water that's
25 leaving the Forebay.

1 Fish typically don't migrate downstream.
2 The fish that -- I should rephrase. The fish that
3 populate the Forebay aren't species that need to migrate
4 to complete their life histories.

5 And these fish species also would not
6 typically tend to migrate, actively migrate downstream
7 for various reasons, but primarily historically that area
8 has been discharged pre-Twin Gorges by waterfall system,
9 and today by a similar waterfall system or turbine.

10 We're not, as I mentioned, increasing the
11 discharge, so the fish populations would not be -- the --
12 the downstream loss of fish would not be increased. So
13 the fish population in the upstream would be maintained
14 as it is currently today.

15 MS. TAWANIS TESTART: So from -- does
16 that satisfy DFO?

17 MR. BRUCE HANNA: I think that's gonna be
18 a sidebar, because I believe that was a question from our
19 consultant, as well.

20 MS. TAWANIS TESTART: All right.

21 MR. BRUCE HANNA: So, we'd like to get
22 his input.

23 MS. TAWANIS TESTART: Okay.

24 MR. BRUCE HANNA: Next, provide a
25 rational and additional information on the specific life

1 history movement characteristics of the fish species that
2 may use the canal to support the three (3) assumptions
3 presented in Section 15.3.2.8.1.5.

4 MS. TAWANIS TESTART: People are laughing
5 at your reference, Bruce. I'm wondering, actually, for
6 this question, is it possible that Deze could actually --
7 I don't have it in front of me, but do you know what the
8 three (3) assumptions are?

9 MS. LINDA ZURKIRCHEN: Can I just say,
10 yes, we will provide that?

11 MS. TAWANIS TESTART: Yes, you can, by
12 October 30th.

13 MS. LINDA ZURKIRCHEN: Yes.
14

15 --- COMMITMENT NO. 2: Deze Energy to provide in
16 writing, by October 30th,
17 2009, rational and
18 additional information on the
19 specific life history
20 movement characteristics of
21 the fish species that may use
22 the canal to support the
23 three (3) assumptions
24 presented in Section
25 15.3.2.8.1.5.

1 MS. LINDA ZURKIRCHEN: But --

2 MS. TAWANIS TESTART: Excellent.

3 MS. LINDA ZURKIRCHEN: -- so that we will

4 -- I can confirm that Deze will provide the -- the life
5 history of the species that are in the -- in the Forebay
6 and that are assumed in those three assumptions, which I
7 don't know what they are off the top of my head either.

8 MS. TAWANIS TESTART: Okay.

9 MS. LINDA ZURKIRCHEN: But I remember
10 researching that question.

11 MS. TAWANIS TESTART: So Deze Energy is
12 committed to providing that response in writing?

13 MR. BRUCE HANNA: That's fine.

14 I think this is going to be a -- a ditto
15 response: Revise the proposed mortality estimates
16 provided in that same section, before -- without actually
17 saying the number again, based on the age and size
18 compositions of fish populations known to use the Forebay
19 around the North Gorge canal and South Gorge spillway
20 areas.

21 MS. TAWANIS TESTART: So DFO is asking
22 that you confirm -- confirm the mortality estimates in
23 the same -- in the same section. Are you saying ditto?

24 MS. LINDA ZURKIRCHEN: Yeah.

25 MS. TAWANIS TESTART: So Deze is

1 committed to provide that response in writing by October
2 30th.

3

4 --- COMMITMENT NO. 3: Deze Energy to provide in
5 writing, by October 30th,
6 2009, revised proposed
7 mortality estimates presented
8 in Section 15.3.2.8.1.5

9

10 MR. BRUCE HANNA: Thank you. Bruce
11 Hanna, DFO. Provide an assessment of the potential for
12 downstream displacement or entrainment of fish during the
13 operation of the Nonacho Lake control structure, as well
14 as the requirement for fish passage for lake trout and/or
15 other species.

16 MS. TAWANIS TESTART: Linda...?

17 MS. LINDA ZURKIRCHEN: I -- probably
18 easiest if I just say, yes, we will provide that and/or
19 talk about it at a sidebar meeting.

20 MS. TAWANIS TESTART: Does that satisfy
21 DFO?

22 MR. BRUCE HANNA: Yes.

23

24 --- COMMITMENT NO. 4: Deze Energy to provide in
25 writing, by October 30th,

1 2009, an assessment of the
2 potential for downstream
3 displacement or entrainment
4 of fish during the operation
5 of the Nonacho Lake control
6 structure, as well as the
7 requirement for fish passage
8 for lake trout and/or other
9 species

10

11 MR. BRUCE HANNA: Bruce Hanna, DFO.
12 Provide an assessment of potential population level
13 impacts and the fish movement characteristics for lake
14 trout, northern pike, and lake whitefish in Nonacho Lake.
15 Data or studies should be provided to justify that only a
16 small proportion of fish populations may be entrained as
17 stated in 15.3.3.8.1.

18 MS. TAWANIS TESTART: Linda...? I'm
19 going to stop paraphrasing --

20 MS. LINDA ZURKIRCHEN: Yeah.

21 MS. TAWANIS TESTART: -- him because he's
22 clear enough on this one.

23 MS. LINDA ZURKIRCHEN: Yeah, same. Yes,
24 we'll -- we'll discuss it at a sidebar and provide
25 information.

1 MS. TAWANIS TESTART: So Deze is
2 committed to providing that information in writing by
3 October 30th and also having a sidebar discussion with
4 DFO related to that topic.

5 MR. BRUCE HANNA: Yes, that -- that's
6 fine for us.

7

8 --- COMMITMENT NO. 5: Deze Energy to provide in
9 writing, by October 30th, an
10 assessment of potential
11 population level impacts and
12 fish movement characteristics
13 for lake trout, northern
14 pike, and lake white fish in
15 Nonacho Lake

16

17 MR. BRUCE HANNA: Did you want a break
18 from me for a while or --

19 MS. TAWANIS TESTART: No, no, no.

20 MR. BRUCE HANNA: -- just keep going?

21 MS. TAWANIS TESTART: I like the sound of
22 your voice, Bruce.

23 MR. BRUCE HANNA: Oh, thank you.

24 Next is: Provide a detailed quantitative
25 assessment of changes in flow condition on ice structure

1 based on local river hydraulics and stream morphology for
2 zones 2 and, cutting into tomorrow, zone 5, and assess
3 the potential impacts to fish and fish habitat. As part
4 of this assessment the impacts of lower flows on water
5 depths and oxygen levels in downstream overwintering
6 habitat should also be included.

7 MS. TAWANIS TESTART: Linda...?

8 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
9 The DAR presents an assessment of predicted changes to
10 ice structure and for the Taltson and Trudel systems.
11 However, recognizing that part of the background to DFO's
12 question is about DO change and that we have a model for
13 DO -- DO, sorry, we have a model for dissolved oxygen
14 change that has not been verified in the field, and that
15 we do commit that we'll look -- we'll commit to looking
16 into the feasibility of collecting in situ or existing
17 baseline dissolved oxygen, and particularly a couple of
18 systems where we know we have the -- a greater potential
19 for magnitude of change in what we've referred before as
20 zone 2, Tronka Chua Lake, and in Trudel Creek.

21 MS. TAWANIS TESTART: Does that satisfy
22 DFO?

23 MR. BRUCE HANNA: That satisfies DFO.

24 Next -- Bruce Hanna, DFO, again -- for the
25 56 megawatt option provide an assessment of impacts to

1 Chua Lake, due to reduced
2 dissolved oxygen levels
3

4 MS. TAWANIS TESTART: Bruce, just before
5 you continue, these questions are related to dissolved
6 oxygen and overwintering and I know INAC had similar
7 questions, and so I'm going to give them the opportunity
8 -- when you're done with your dissolved oxygen questions
9 we'll give INAC the opportunity to ask theirs. And after
10 that we're going to take a break.

11 MR. BRUCE HANNA: The next one -- Bruce
12 Hanna, DFO -- reassess the potential impacts to aquatic
13 life using the cold water dissolved oxygen values
14 presented in the CCME Guidelines.

15 MS. TAWANIS TESTART: Linda...?

16 MS. LINDA ZURKIRCHEN: Yes, we will
17 commit to providing that reassessment.

18 MS. TAWANIS TESTART: By October 30th?

19 MS. LINDA ZURKIRCHEN: Yes, by October
20 30th.

21 MS. TAWANIS TESTART: Is that fine with
22 DFO?

23 MR. BRUCE HANNA: That's fine.
24

25 --- COMMITMENT NO. 7: Deze Energy to provide in

1 writing, by October 30th, a
2 reassessment of the potential
3 impacts to aquatic life using
4 the cold water dissolved
5 oxygen values presented in
6 the CCME Guidelines
7

8 MR. BRUCE HANNA: Bruce Hanna, DFO. We
9 have two more before I run out of oxygen.

10 Provide any data collected on dissolved
11 oxygen during the ice observation field visits along the
12 Taltson River and Trudel Creek. If this information was
13 not collected, Deze should commit to conducting baseline
14 DO sampling during the winter season in zone 2 and 5 at a
15 minimum to verify the conclusion reached by the model.
16 Year-round sampling of dissolved oxygen for zones 2 and 5
17 should form part of the project's DO monitoring program.

18 MS. TAWANIS TESTART: Linda...?

19 MS. LINDA ZURKIRCHEN: Yes, we will do
20 that.

21 MS. TAWANIS TESTART: By October...?

22 MS. LINDA ZURKIRCHEN: Sorry, it's the
23 same - it's part of the same program we've spoken of in
24 that we will -- we will write up our commitment prior to
25 October 31st for what we can do to verify the model for

1 winter dissolved oxygen.

2 MS. TAWANIS TESTART: Does that satisfy
3 DFO?

4 MR. BRUCE HANNA: Even though we've
5 tagged that extra day on to October 31st, that still
6 satisfies DFO.

7 MS. TAWANIS TESTART: I could be wrong
8 but I think it's a weekend day, October 31st, that's why
9 I set it at October 30th.

10

11 --- COMMITMENT NO. 8: Deze Energy to write up
12 commitment, prior to October
13 30th, for what they can do to
14 verify the model for winter
15 dissolved oxygen, and provide
16 supporting evidence to the
17 conclusion that the reduced
18 flow expected during the
19 winter season will be
20 sufficient to uphold the
21 concentration of dissolved
22 oxygen, as prescribed in the
23 CCME guidelines for cold
24 water

25

1 MR. BRUCE HANNA: The last one we have
2 on oxygen, at least for this one: Provide supporting
3 evidence to the conclusion that the reduced flow expected
4 during the winter season will be sufficient to uphold the
5 concentration of dissolved oxygen as prescribed in the
6 CCME guidelines for cold water. And that's Canadian
7 Council of Ministers of the Environment. I think it's
8 all related, actually.

9 MS. TAWANIS TESTART: Linda...?

10 MS. LINDA ZURKIRCHEN: Yes, it's -- it's
11 related and we'll cover it under the same written
12 response by October 31st.

13 MS. TAWANIS TESTART: Okay. So are we
14 going to offer INAC the opportunity to ask their
15 questions related to dissolved oxygen bubbles?

16 MS. CANDACE ROSS: I actually think that
17 Bruce asked our question.

18 MS. TAWANIS TESTART: Okay, excellent.
19 So you have no further questions?

20 MS. CANDACE ROSS: No further questions.

21 MS. TAWANIS TESTART: And so, Linda, INAC
22 had asked a similar question or perhaps the same question
23 as DFO related to this topic so perhaps that response
24 that you provide, which of course will be put on the
25 distribution list, but you can address it to INAC, as

1 well.

2 MS. LINDA ZURKIRCHEN: Yes, we will.
3 Does -- do what we've talked about here cover all of
4 INAC's interests or would I -- maybe we can just hear
5 that and make sure that we do cover off INAC.

6 MS. TAWANIS TESTART: She just said that
7 --

8 MS. CANDACE ROSS: The question that we
9 had was to expand the current monitoring into the winter
10 season, in particular for zones 2 and 5, for dissolved
11 oxygen. So that was Bruce's second last question.

12 MS. TAWANIS TESTART: So, yes.

13 MS. LINDA ZURKIRCHEN: Yes.

14 MS. TAWANIS TESTART: Okay. I'm going
15 to call for a fifteen (15) minute break, so that everyone
16 can refill -- so that I can refill my coffee cup, and we
17 can refuel with some fruit and muffins and such.

18 And so we'll come back together at quarter
19 to the hour.

20

21 --- Upon recessing at 10:30 a.m.

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

23

24 MS. TAWANIS TESTART: Okay. So we're
25 gonna go back to DFO because they have some more

1 questions. And I'd just like to remind everyone that
2 Bertha is translating for Albert in the corner, and so if
3 everyone could speak clearly and slowly and avoid
4 acronyms and just try and be clear for her, that would be
5 much appreciated.

6 Oh, and also, I'm pleased to say that we
7 have correct agendas that are at the front table if
8 anyone wants to pick one up.

9 So, Bruce...? Bruce needs a microphone.

10 MR. BRUCE HANNA: Okay. Bruce Hanna,
11 DFO.

12 The next question is: Provide background
13 information on the rule of thumb criteria used to assess
14 significance of impacts for changes in water level,
15 including examples of where it has been used previously
16 and evidence of it being a valid method of assessment.

17 And I believe the rule of thumb criteria
18 that we're referring to was used to evaluate flow
19 management for the Taltson Basin, with regards to
20 migration and access to habitats and food supply, but
21 just for contents.

22 MS. TAWANIS TESTART: Linda...?

23 MS. LINDA ZURKIRCHEN: You didn't want to
24 paraphrase that one either?

25 MS. TAWANIS TESTART: I'm -- I'm not

1 going to paraphrase any more. So everyone can feel much
2 better about that.

3 MS. LINDA ZURKIRCHEN: Okay. Linda
4 Zurkirchen. Yes, in review of the DAR, a rule of thumb
5 was the wrong term to have included in the DAR. It's not
6 -- what we did was develop a criteria or a threshold
7 based on the current modelled hydrograph and --
8 internally -- and based on that threshold or criteria we
9 then gauged the change in the hydrograph of the 36 and 56
10 megawatt scenarios.

11 So the term rule of thumb is not an -- is
12 not relating to industry standards but it's developed
13 criteria which are presented in the DAR. Basically wrong
14 terminology.

15 MS. TAWANIS TESTART: Does that satisfy
16 DFO?

17 MR. BRUCE HANNA: Yes. Bruce Hanna, DFO.
18 I guess I actually skipped one (1). We've asked that
19 Deze complete additional wetland surveys in zones 2, 3
20 and 4 and time lines for the completion of these studies
21 should be provided.

22 MS. TAWANIS TESTART: Linda...?

23 MR. SHANE UREN: I guess it's my turn
24 here.

25 MS. TAWANIS TESTART: Can you say your

1 name please?

2 MR. SHANE UREN: Shane Uren. Yeah, we're
3 committing to doing some more wildlife -- sorry, wetlands
4 monitoring before operations -- before operations begin
5 on the project.

6 I think probably the best is to have a
7 sidebar meeting to discuss the best locations there. I
8 think, given the 65,000 square kilometres of watershed, I
9 think we'd like to try to focus on some of the -- the
10 keys areas. I think we tried to do that for our baseline
11 studies with a big effort in Trudel and then a decent
12 effort in Nonacho given the size.

13 So we'd like to look at some additional
14 areas and collect some more information that will allow
15 us to validate some of our predictions in the DAR.

16 So you'll -- you'll see that -- maybe we
17 can talk a little bit about that. We've been -- you
18 know, our -- our approach kind of from the beginning was
19 that we were -- we wanted to work with the parties to
20 develop a monitoring program.

21 And we kind of -- we -- we started that
22 process there when we met last time at the technical
23 session but we realized quickly that it was kind of
24 unfair to -- to get into those details given that some of
25 the level of understanding of the DAR at that time was --

1 definitely wasn't where we were.

2 We wrote it so we thought we'd give the
3 parties some time. And now that we've seen the IRs that
4 have come through now I think some of the issues from the
5 parties that we see match a lot of the issues that we
6 saw, as well.

7 So we've started to -- we've started to
8 develop what we're calling the terms of reference for our
9 monitoring program because we do want to put one (1)
10 together that's a co-operative effort between the
11 parties.

12 So we don't want to put a draft out and
13 say comment on the draft. So what we've got now is a
14 terms of reference that we hope to release very soon to -
15 - to the Board so that we can get that out to the parties
16 and start working on -- working from that document.

17 And that document will include the design
18 of a program, an outline of a design of a monitoring
19 program, as well as identify areas where additional data
20 will be needed to help answer questions or to form
21 testable questions and then provide answers to those
22 questions.

23 As well, there's -- there's -- there's an
24 opportunity there to outline adaptive management
25 strategies that we are -- we have been discussing here

1 internally and would like to get those out as preliminary
2 plans to work with the parties to develop robust plans
3 kind of going forward. So that's coming.

4 MR. BRUCE HANNA: Bruce Hanna, DFO. I
5 think for -- for some of these areas a good monitoring
6 program is definitely very important, a sufficient
7 baseline and then to check the predictions in the EA.

8 But some of this information I guess will
9 require an advance just to determine impacts, so as far
10 as the environmental assessment what decision is reached
11 on whether the project should go ahead or not.

12 So just to add some of that information
13 and then it could be used, like as I say, as baseline for
14 a future monitoring program if the project does proceed.

15 MS. TAWANIS TESTART: So what you're
16 saying is that those additional wetland surveys and --
17 and information about the wetland areas in the project
18 area, that DFO requires that information to understand
19 the impacts or potential impacts to the project?

20 MR. BRUCE HANNA: Bruce Hanna, DFO.
21 Yeah, I -- I think if we are looking at the impacts, we
22 would need that information as part of the environmental
23 assessment.

24 MS. TAWANIS TESTART: Okay.

25

1 --- COMMITMENT NO. 9: Deze Energy to supply
2 information about the wetland
3 surveys illustrating the
4 impacts or potential impacts
5 to the project
6

7 MS. TAWANIS TESTART: Linda...?

8 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
9 I'd like to suggest that -- that we can talk about this
10 on the sidebar also, but that we look at the difference
11 between the -- recognizing that we may want to look at
12 the details of effects with DFO, in consideration of the
13 -- the Fisheries Act and Section 35(2) permitting level
14 at a -- and maybe this and some of the additional
15 information that's required to better understand or
16 detail some of those effects, could be done prior to the
17 Section 35(2) process but may not be required in order
18 for us to complete the EA process, recognizing that
19 there's -- there's a more detailed process that still has
20 to occur in order for Deze to satisfy to the Section
21 35(2) of the Fisheries Act.

22 MR. BRUCE HANNA: Bruce Hanna, DFO. I -
23 - I think that's fine.

24 MS. TAWANIS TESTART: All right. I would
25 also like to note that the Review Board has received

1 advice from our technical experts that there's more
2 information possibly needed about wetlands and
3 particularly wetland surveys, and so that sidebar meeting
4 might become a little bit more involved as we might
5 require that information, as well.

6 MS. TAWANIS TESTART: Bruce...?

7 MR. BRUCE HANNA: Bruce Hanna, DFO.
8 Next question is: Indicate whether the food supply
9 pathway included items being transported by flowing water
10 to areas of the water course where there is no or limited
11 access to shoreline vegetation. If this was not done,
12 please provide a rationale.

13 MS. TAWANIS TESTART: Linda...?

14 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
15 Is that the -- the rate of downstream transport of food
16 is not going to be significantly changed. There -- there
17 still will be a downstream transport. The Nonacho Lake
18 does not have, as we mentioned before, a large or any
19 really increase in storage. It's just the change in the
20 management of the discharge that's being considered for
21 the project. Therefore, the downstream transport of food
22 will still be occurring to those areas and the littoral
23 zones will still be accessible for -- for the forage, for
24 the fish forage.

25 MS. TAWANIS TESTART: Does that answer

1 your question?

2

3

(BRIEF PAUSE)

4

5 MR. BRUCE HANNA: Bruce Hanna, DFO. Yes,
6 that -- that does answer the question. This will apply
7 to Trudel Creek, as well, and we can get into that
8 tomorrow.

9

MS. TAWANIS TESTART: Next question?

10

MR. BRUCE HANNA: Again, this could
11 refer to Trudel as well, but we've asked that Deze
12 provide an assessment of the potential impacts to fish
13 and benthic invertebrates should re-establishment of
14 littoral zones, the shallow zones, not occur in the best
15 case scenario of one (1) to three (3) years.

16

MS. TAWANIS TESTART: Linda...?

17

MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
18 I believe that's most probably focussed mainly on Trudel
19 Creek as opposed to the Taltson Basin or more so because
20 Trudel Creek is the -- the zone of the basin that will
21 experience the -- the largest change in the hydrograph
22 and that we -- we will look into -- Deze will commit to
23 looking into that assessment further of -- in the event
24 that our assumption of vegetation reproduction does not
25 occur in the time frame that's been presented in the DAR,

1 what would the effects likely be on the -- the fish
2 populations. Our -- and our focus would be primarily on
3 Trudel Creek.

4
5 --- COMMITMENT NO. 10: Deze Energy to provide an
6 assessment of the potential
7 impacts to fish and benthic
8 invertebrates should re-
9 establishment of littoral
10 zones not occur in the best
11 case scenario of one (1) to
12 three (3) years

13
14 MR. BRUCE HANNA: Okay. Bruce Hanna,
15 DFO. I believe you're right. This is for -- the main
16 focus would be Trudel but there are other areas where
17 this could be looked at, such as Nonacho.

18 The next question: For Nonacho Lake --
19 and again I apologize for the -- the reference, but it
20 states in 13.9.11.2.1 that:

21 "The re-establishment of the new water
22 level regime depends on the currently
23 submerged substrate and the innundation
24 characteristics of the proposed water
25 management scheme."

1 DFO requests that Deze indicate whether it
2 is possible to adjust the water management scheme to
3 reduce the amount of littoral vegetation lost and assist
4 in re-establishing vegetation.

5 MS. TAWANIS TESTART: Linda...?

6 MS. LINDA ZURKIRCHEN: I -- well,
7 speaking for Taltson, as opposed to Trudel, because as
8 Bruce said, the question is applicable to both systems
9 and it does have a different answer for both systems.
10 So, I'll speak -- recognize that this morning's session
11 is only on the Taltson.

12 I'd like to clarify that when we're
13 talking about the Taltson and the changes to the Littoral
14 Zone and the vegetation, we're speaking of a change in
15 vegetation, as opposed to a loss in vegetation, in that
16 the areas will re-vegetate, or most areas, we're drawing
17 down the water below, the current vegetation, the
18 subaqueous, and the emergent vegetation. Therefore, for
19 Taltson we're speaking about a change in vegetation as
20 opposed to a loss.

21 So, I find the -- feel the question is
22 answered in the DAR for Taltson, but has a different
23 response for Trudel, which we'll couch for later.

24 MS. TAWANIS TESTART: Does that satisfy
25 DFO, understanding that we'll probably ask this question

1 again tomorrow morning?

2 MR. BRUCE HANNA: Yeah, I think that --
3 that's fine. Bruce Hanna, DFO.

4 I think this has already been addressed by
5 Shane, but that the Deze Energy Corp develop an adaptive
6 management plan for addressing impacts to the aquatic
7 ecosystem, should the littoral vegetation in Nonacho Lake
8 or Trudel, but not occur within the predicted timeframe.

9 But, I think, Shane, you were mentioning
10 an adaptive management to at least a -- a draft?

11 MS. TAWANIS TESTART: Just to clarify,
12 Deze Energy has committed to producing some form of
13 monitoring plan for review by the parties in this
14 assessment, in terms to reference or a draft plan,
15 something that the parties -- and so, I think any
16 questions related to adaptive management or monitoring or
17 any kind of follow-up activities can be addressed with a
18 blanket answer that it's coming.

19 Next question?

20 MR. BRUCE HANNA: Yeah. Deze Energy
21 Corp, we'd ask that they commit to conducting additional
22 baseline studies on aquatic resources, in Zones 1 through
23 5, including bathymetric surveys, in order to better
24 predict potential impacts to aquatic resources and to
25 form the basis of any future bio-monitoring programs.

1 Timelines for the completion of these studies should be
2 provided.

3 And again, based on the discussion this
4 morning, I believe Deze is going to be looking at doing
5 additional baseline studies to -- to fill in data gaps.

6 MS. TAWANIS TESTART: Shane...?

7 MR. SHANE UREN: Okay. Shane Uren.
8 Yeah, we -- we do commit to developing a monitoring plan,
9 which includes the addition of -- of baseline data in the
10 various zones. I think through discussions and work with
11 the parties we'd like to focus some of those locations,
12 identify some of the key locations. Given the size of
13 the -- the watershed, we'd like to try to pick our spots
14 and collect sufficient information so that we can make --
15 verify our predictions in the -- in the DAR.

16 So, yes, we're committing to working that
17 into a monitoring program document.

18 MS. TAWANIS TESTART: Does that satisfy
19 DFO?

20 MR. BRUCE HANNA: Bruce Hanna, DFO.
21 Yes. Just realizing that some of the data gaps will need
22 to be filled for parties to adequately review the -- the
23 project in the EA.

24 MS. TAWANIS TESTART: Probably at some
25 point we'll have to get commitments on -- on what

1 baseline data specifically will be committed to being
2 collected, but not at this particular moment.

3 Are you out of questions, Bruce?

4 MS. LINDA ZURKIRCHEN: May I ask a
5 question in regards to that?

6 Is it -- if DFO is -- or other parties
7 identify that there's a lack of data currently available
8 to complete the EA assessment, can we get further
9 information as to what aspects of our assessment
10 presented in the DAR are not -- that -- that what is
11 lacking in the DAR for them to complete their assessment
12 of it, in that we've presented an assessment where we've
13 identified there, for an example, may be no significant
14 negative effect to an aquatic resource in a specific
15 area, and then for us to scope a program or to have a
16 more quality discussion on what that program should
17 include it would help for us to understand what aspect of
18 the assessment that they have discomfort with.

19 For example, is it the assumption or is it
20 the potential, is it our methodology, is it our
21 assumptions, what aspect of the presentation we made in
22 our assessment or the assessment we made is -- is
23 providing discomfort, in that they're unable to complete
24 the assessment, or to complete their review of our
25 assessment?

1 MR. SHANE UREN: And just to add to that
2 as well, and how -- how that information would
3 potentially change some of the predictions that were made
4 in the DAR or -- or lead to different conclusions. I
5 think -- think that's what we're -- we're kind of looking
6 for there.

7 MR. BRUCE HANNA: Yeah, Bruce Hanna,
8 DFO. I can leave it to other parties from their
9 perspective, but for us it would be things like the lake
10 trout spawning, where they spawn, so we can identify
11 impacts in Nonacho for the drawdown; the dissolved oxygen
12 monitoring that you've committed to; and filling in some
13 of the data gaps that currently exist in Zone 2, which I
14 think has been noted in the DAR. And that's where I'm
15 looking as far as data gaps, just filling in some of
16 those holes that have actually been identified in the DAR
17 as -- as lacking.

18 MS. LINDA ZURKIRCHEN: So, and those are
19 the ones we -- we spoke of this morning and have -- have
20 committed to making -- to picking up some additional data
21 from our commitment, so definitely pre-Section 35(2)
22 finalization.

23 Speaking to the aquatic section and the
24 request for additional information on -- on the aquatics,
25 aquatics primarily identified as aquatic species other

1 than fish -- the way it's been used in the DAR, and I
2 assume that's the way DFO used it in this IR. That's
3 certainly -- and the request for more information there
4 before we can sort of even talk about what information is
5 required, we had to understand what is -- again, what the
6 discomfort is with the assessment we made, and why we --
7 why -- not in the negative content, but definitely as
8 Shane said why we need to in fact pick up that
9 information and how it'll change -- potentially change
10 the effects assessment made.

11 So recognizing that we've made some
12 commitments already and -- and see those needs, the need
13 is not clear to us under the aquatics component.

14 MR. BRUCE HANNA: Bruce Hanna, DFO. Not
15 to go into the point too much, but just as far as -- like
16 some of the information you've committed to getting that
17 will help us in our review of impacts and all that, and
18 again it would -- it'll also help further on down the
19 line with -- like you say with the Fisheries Act
20 authorization, if that's the way it goes.

21 I don't know if anyone else has specific
22 areas but that's just someone we could flag, and during
23 the sidebar meetings we can take another look and see if
24 there is anything specific, other than the ones that are
25 being identified now.

1 MS. LINDA ZURKIRCHEN: Okay. So we'll
2 talk about the needs of additional information required
3 to complete the -- your review of the DAR, during
4 sidebar. And -- and we can have that discussion here and
5 then submit that information to -- DFO can then submit
6 that -- whatever outstanding request to the Review Board,
7 or we can submit an outcome of our sidebar meeting to the
8 Review Board?

9 MS. TAWANIS TESTART: Yes, an outcome of
10 the meeting.

11 MR. BRUCE HANNA: Yes, I think -- I
12 think that's fine.

13

14 --- COMMITMENT NO. 11: Deze Energy to submit outcome
15 of sidebar meeting,
16 concerning additional
17 information required to
18 complete review of the DAR

19

20 MS. TAWANIS TESTART: All right. so do
21 you have more questions?

22

23 (BRIEF PAUSE)

24

25 MR. BRUCE HANNA: I think we have maybe

1 one (1) or two (2) more. Provide an assessment of the
2 potential for localized scour and erosion at the points
3 where flows from where the Twin Gorges facility enters
4 the Taltson River and flow directed into the spillway
5 that enters the river below the Twin Gorges dam.

6 MS. TAWANIS TESTART: Linda...?

7 MS. LINDA ZURKIRCHEN: And I -- I might
8 call on Tom to -- to wake up and -- and be -- be part of
9 this conversation, too. But I can speak to the bypass
10 spillway first in that -- that was the one of the
11 channels that was the river -- natur -- natural roots of
12 the river prior to the existing Twin Gorges facility.
13 And it's primarily through bedrock and well scoured over
14 time. Well scoured down to bedrock over time, so there
15 wouldn't be any increase in erosion resulting from the
16 bypass facility.

17 At the tail race I believe there is a -- a
18 discussion or potential erosion from the tail race in one
19 of the section 15.3, Operations. Water coming out of the
20 tail race is low energy water environment. The -- the
21 energy that was -- that was contained in the water had
22 been used to generate power.

23 So the -- the resulting flow that comes
24 out of the tail race has a relatively low velocity and it
25 comes into the Taltson at elevation of the water, so

1 there's not a -- because all the elevation difference has
2 also been maximized for -- used in the power, so there's
3 not a lot of elevation drop or velocity in the water that
4 comes out of the system, and therefore there's very
5 little erosion potential that occurs.

6 There is a description of the environment
7 at the tail race in Section 15.3. I think there is a
8 small amount of gravel habitat if I recall, immediately
9 at the tail race and that is discussed in that section.

10 Tom, did you want to -- I'm just wondering
11 if Tom wanted to either confirm my discussion of the tail
12 race water. Confirm that I'm describing that accurately.

13 MR. TOM VERNON: Basically the -- I agree
14 with Linda. The tail race would resemble the Taltson
15 River as it -- as it looks below the -- the plant
16 basically. The canal would be sized. The discharge --
17 the tail race canal would be sized for very low
18 velocities in that water, low energy environment.

19 And while there may be some minor changes
20 in distribution of -- of riverbed materials right at --
21 at the junction of the tail race and the -- the river,
22 there's really no potential for -- there's not enough
23 energy in that flow to develop any significant erosion.

24 MS. TAWANIS TESTART: Does that satisfy
25 DFO?

1 MR. BRUCE HANNA: Yes. Bruce Hanna, DFO.
2 I think the answer -- this was related -- if there was
3 potential for scour or erosion to identify any mitigation
4 measures that could be implemented, including features
5 within the -- the spillway intended to reduce the
6 velocity of flow.

7 But as I understand it, you're not
8 expecting it to be an issue so likely wouldn't be looking
9 at features within the spillway.

10 MS. TAWANIS TESTART: Linda...?

11 MS. LINDA ZURKIRCHEN: Yeah, that's
12 correct.

13 MR. BRUCE HANNA: Bruce Hanna, DFO. As
14 much as I know you like the sound of my voice, I only
15 have one (1) more question.

16 Deze Energy Corp., we would like them to
17 assess the possibility that higher flows in the winter
18 will initiate early spawning by fish species that
19 normally spawn in the spring, in correlation with the
20 annual freshet.

21 That again will be linked to Trudel, as
22 well.

23 MS. TAWANIS TESTART: Linda...?

24 MS. LINDA ZURKIRCHEN: We have taken note
25 of that IR and we'll be looking into that and getting our

1 response back to DFO by the end of October.

2 MS. TAWANIS TESTART: Actually, you
3 should be providing that response to -- to the Review
4 Board and --

5 MS. LINDA ZURKIRCHEN: Oh sorry, the
6 Review Board.

7 MS. TAWANIS TESTART: -- then we'll
8 forward it, yes by the end of October.

9 MS. LINDA ZURKIRCHEN: Okay.

10 MS. TAWANIS TESTART: Does that satisfy
11 DFO?

12 MR. BRUCE HANNA: That satisfies DFO.

13

14 --- COMMITMENT NO. 12: Deze Energy to assess the
15 possibility that higher flows
16 in the winter will initiate
17 early spawning by fish
18 species that normally spawn
19 in the spring, in correlation
20 with the annual freshet

21

22 MS. TAWANIS TESTART: So do we have any
23 other parties that would like to ask questions. INAC
24 seems to be nodding at me so...

25 MS. CANDACE ROSS: Candace Ross, with

1 INAC. I know we've talked about terms of reference for
2 monitoring programs, so I'll just read our request and I
3 already know the answer.

4 So INAC requests that Deze provide draft
5 monitoring frameworks for the Taltson River watershed,
6 Trudel Creek, and canal construction, and canal
7 operation. These draft monitoring programs should --
8 should serve as a starting point for Deze Energy to work
9 with interested parties to develop monitoring programs.

10 And that Deze identify contingency plans,
11 should mitigation measures fail, and provide an outline
12 of any adaptive management programs related to water
13 quality and quantity. This should include affects both
14 during and post construction.

15 MS. TAWANIS TESTART: Linda...?

16 MS. LINDA ZURKIRCHEN: Yes, we will do
17 so.

18 MS. TAWANIS TESTART: Does that satisfy
19 INAC?

20 MS. CANDACE ROSS: Yes.

21

22 --- COMMITMENT NO. 13: Deze Energy to provide draft
23 monitoring frameworks for the
24 Taltson River watershed,
25 Trudel Creek, and canal

1 construction, and canal
2 operation
3

4 MS. CANDACE ROSS: Okay, my next question
5 relates to baseline data for water quality. And so the
6 request is that Deze explain why baseline water quality
7 data was not collected in Zones 1, 2, and 4, and then
8 indicate whether you will collect the -- collect water
9 quality data for these zones and identify the timeframe
10 for collection of that data.

11 MS. TAWANIS TESTART: Deze...?

12 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
13 You're correct, we have not collected water quality for
14 Zones 1, 2, and 4, primarily because of the size and
15 configuration of the -- the Taltson Basin, in that there
16 does not -- and the other anthropogenic or human intro --
17 potential for human-introduced components, contaminants
18 to the water system and the water quality, that we feel
19 the water quality samples that we have taken are
20 representative of the system as a whole, and see no
21 reason for changes in that water quality throughout the
22 system.

23 Therefore, as part of the monitoring
24 program, currently in what we're working on we don't have
25 the intent to pick up additional water quality in those

1 zones, certainly recognizing that there are -- there are
2 certain zones that we do want to pick up water quality:
3 The upstream environment in the Nonacho area, upstream in
4 the -- in the basin, and somewhere else downstream in the
5 basin at other sites, between where there are going to be
6 works or influences from the project on the water
7 quality.

8 MS. TAWANIS TESTART: Does that answer
9 your question?

10 MS. CANDACE ROSS: I'm going to have to
11 take that back, but I think maybe more discussion might
12 be warranted.

13 MS. TAWANIS TESTART: Okay. Do you have
14 another question?

15

16 (BRIEF PAUSE)

17

18 MS. CANDACE ROSS: Would canal
19 construction fit into this section?

20 MS. TAWANIS TESTART: I think we can
21 reserve that for tomorrow afternoon when we talk about
22 project design.

23 MS. CANDACE ROSS: Okay, then that's all
24 I have.

25 MS. TAWANIS TESTART: And does

1 Environment Canada have any questions related to the
2 Taltson watershed?

3

4 (BRIEF PAUSE)

5

6 MS. STACEY LAMBERT: No, I think the
7 questions I have are for tomorrow's session.

8 MS. TAWANIS TESTART: They're related to
9 Trudel Creek?

10 MS. STACEY LAMBERT: Or -- well, I don't
11 know where to fit in my question related to blasting.

12 MS. TAWANIS TESTART: Oh, yeah,
13 tomorrow's probably --

14 MS. STACEY LAMBERT: And as well, sewage
15 treatment, too.

16 MS. TAWANIS TESTART: Yeah, tomorrow,
17 that'd be good.

18 And now I guess I'll ask the people from
19 Lutsel K'e and Fort Resolution Metis if they have any
20 questions about the water in the Taltson watershed.

21

22 (BRIEF PAUSE)

23

24 MR. GEORGE MARLOWE: Lutsel K'e, George
25 Marlowe.

1 We have lots of things to say about the
2 water, the land, but I'm happy there is DFO here and
3 Canada people and some people across the government or
4 whatever.

5 For our site take I -- hear from us. Like
6 -- talk with these people, talk about them. Yesterday at
7 -- I mean, the other day in Lutsel K'e. For the
8 watershed you said Nonacho Lake, but I -- I used to trap
9 there too, way up to Gray Lake. Gray Lake and Nonacho
10 Lake's all connected, one (1) lake now. So -- so I don't
11 know how you mean by the watershed Nonacho Lake. That's
12 a big lake. That's two (2) lakes.

13 And also there's good upstream coming from
14 Porter Lake. I don't know that one because I've never
15 been there for a long time. I don't know how far the
16 water goes up. I know it's coming down but I don't know
17 how -- anymore, but from Gray Lake to Nonacho Lake and
18 then Nonacho Lake to down close to Fort Smith where the
19 hydro is now, that's different...

20 I'm not talking from -- it should've been
21 the Fort Smith people here, too. We've got a couple of
22 guys from Fort Resolution and way down towards Taltson
23 where they used to go trapping, I guess. I've never been
24 that way -- but anyway, I would like to break into a
25 group myself, like I want to talk to DFO and then Canada

1 and the people across, separate and then we could go back
2 together again, because we've got a chance -- you people
3 to hear from us, because if this project is going to go
4 ahead we have to make -- a good solution comes out from
5 there like a good -- be good for Deze and then Water
6 Board, and from DFO, everybody.

7 If it's not good, well it's pretty hard to
8 work together like that, but I'll have to come -- make --
9 a good solution comes out. So to make it into one (1) so
10 everybody will be happy. Right now, that's why I'd like
11 to have a group alone, talk to DFO here. We have DFO
12 people in Lutsel K'e like to do -- like, research every
13 summer about the water and the fish, things like that.
14 Also, they've got one (1) here, too, at Dettah, and Fort
15 Resolution, which that helps really good.

16 I'm not going to talk. I just want to go
17 talk about the water now but there's a lot of things to
18 say, but that's all I want to say. I want to meet with
19 these people here. Thank you.

20 MS. TAWANIS TESTART: Thank you, George,
21 for your comments. It would be good to have small group
22 meetings. Today we need to be all in one (1) group and
23 talking all together because it needs to be put on the
24 transcript so that we can record what everybody said, but
25 hopefully everyone can find the time that everybody can,

1 if they want to meet as a sidebar meeting, that they can
2 do so, but thank you for your words.

3 Can you state your name?

4 MR. CHARLIE CATHOLIQUE: Good morning. My
5 name's Charlie Catholique, I'm from Lutsel K'e. I'm a
6 band councillor. I represent my people back home.

7 I was away from Lutsel K'e over a week
8 now. I've been travelling on -- for meetings, so I
9 wasn't in Lutsel K'e for that hearing. It's -- we -- we
10 hired a couple -- couple ladies there to collect that
11 data and information from the Elders where that big
12 meeting was -- was held in Lutsel K'e.

13 I guess -- so maybe I thought I'd just
14 drop by here and listen to what's happening here at the
15 meeting, because I think this meeting that's -- it's
16 really important because that meet -- what you're talk --
17 discussing the area it's -- it's -- that's where I come
18 from. That's where I used to hunt and trap.

19 I guess this is something for us that's
20 not new. I guess we had to go away back. We had to know
21 the history about that area, because I know that we're
22 talking about water. I know it's -- it's been damaged
23 already in the past.

24 So how we're -- how are we gonna fix that?
25 How can we make it better today? So I think that's what

1 we'll have to come up with for tomorrow, have a better
2 solution.

3 I guess, water, it's -- it's really
4 important. Water is a life for the fish, for animals,
5 for everything that's around the area there.

6 I know it's -- my people, they know about
7 that area already, it's damaged. People, they used to go
8 hunting in that area in the olden days, but now it's
9 different because of the high level of water.

10 We lost two (2) trappers there because of
11 the water. You can't go anywhere. You can't travel on
12 the lake anywhere now today because of the high water,
13 because there's lots of open water. It's high water
14 because of -- some areas you can't see the islands now.

15 And you go -- you go on that Nonacho Lake,
16 you go along the shore, you can't -- all these dead trees
17 are in the water because the water's so high. And also
18 the fish too. It's different. Those Elders, they're on
19 the site already, in the past. They're telling me about
20 stories about that area after it was damaged.

21 But for, I guess, the fish, it had to be
22 protected because of spawning. And somehow, I mean, the
23 water in that -- that fish spawn in, I mean, I don't know
24 if the water's too high. I mean, how are they gonna
25 survive?

1 I know -- I guess my people always talk
2 about compensation every time we have a meeting. That's
3 had to be dealt with first. I'm not the one that making
4 decision. This come from -- from my members back home.

5 Because for compensation for damage in
6 that area, you have to look at the water. You have to
7 look at the plants, trees, fish. You have to look -- you
8 have to do all that environmental assessment before we go
9 ahead, you know. We have to make sure. I know it's
10 already damaged already. And how about these fish,
11 what's gonna happen to it?

12 That's why, I mean, we have to make sure
13 we do anything on that -- on that area, we have to make
14 sure everything would be okay. Because that is -- this
15 is my -- my trap line and hunting, the area you're
16 talking about here.

17 Because I know it's really important to
18 me. You know, I live off the land. That's why your
19 people here, I mean, have to make sure first before
20 nothing happens to that area, water, fish, all the
21 animals.

22 Even for our plants, that's medicine for
23 us, you know. You have a look at that too, plants. You
24 have to look every -- at every little inches of that
25 area, the land. It's really important, you know.

1 You want to do business on it, we'll have
2 to sit down and talk about it, you know. We just cannot
3 go ahead and say, okay, go ahead. We've got to have a
4 business plan in place, negotiation, everything.

5 That's why, I mean, you have to come to
6 community, we have to communicate, you have to come to --
7 to Elders because they know all that area, they know that
8 area.

9 I don't know how many of you have been to
10 that place, to Nonacho Lake. It's nice, I mean, if you
11 go and visit that area, you can see it for yourself.
12 Sitting in the office, I mean, you don't know what's
13 going on outside. That's why it's nice to have a
14 meeting, learn more about that area, learn more about how
15 can we work together. See, that's the -- that's a big
16 step for us, you know.

17 That's why, I mean, water and fish are
18 real important for us, and also our hunting and trapping.
19 Now people can't go out there now because of the -- of
20 the high water. Too dangerous to go out there now. We
21 cannot travel on the lake anywhere like before.

22 So I think I just want to bring that up to
23 let you know. You got to know about that history. We
24 have all kind of information back home. I think that's
25 where it's got to start from, I think, because I live

1 near there, just right in my backyard. That's what's
2 happening here. That's why I think we have to work
3 really closely together 'cause I can't say yes, I can't
4 no because -- at this time. I think we need more
5 discussing, we need more information, all that. I think
6 that's what we have to do here. Thank you very much.

7 So I just want to be -- bring those up to
8 your attention. I'm not involved in this meeting, so I'm
9 just dropping by and listen. Thank you.

10 MS. TAWANIS TESTART: Thank you, Charlie.
11 It's -- it is important that we listen and we understand,
12 and we understand what the issues are from everybody who
13 is at the table and everyone who's involved. And thank
14 you for sharing your views.

15 Does anyone else have any questions about
16 the water -- water levels, water quality in the Talston
17 watershed?

18 Okay. So if the -- if the parties have
19 asked all the questions that they have, then I'd like to
20 ask if the Review Board experts could ask some of the
21 questions that they've brought forward to the developer,
22 so that we can get a -- a clearer picture of what some of
23 the issues might be.

24 I don't know. Do you want to go first,
25 Aleksey, or does Bruce? Do you want to flip a coin?

1 Okay. Bruce Stewart from SENES Consulting, a Review
2 Board advisor.

3 MR. BRUCE STEWART: My first question
4 again relates to adequacy of the baseline and in
5 particular -- in particular related to stream crossings,
6 and that is that Deze has not committed to doing any
7 studies of the stream crossings themselves or of
8 transmission line routings.

9 And I wonder how, given that they're going
10 to be able to identify particularly sensitive habitats
11 that may need extra care from the crossings, and how
12 they'll be able to assess alternate transmission line
13 routings?

14 MS. TAWANIS TESTART: Linda...?

15 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
16 Thanks, Bruce. Just I can add some information to that.
17 As mentioned in the -- in the DAR, we would be using
18 DFO's operational statement for overhead line
19 construction as our best management practices, our
20 guideline for conducting works on the transmission line
21 in and around water bodies by -- and that's one (1) of
22 the -- the -- the primary mitigation measure that we
23 would use to protect the stream crossings and water
24 bodies during the transmission line construction and
25 maintenance.

1 By committing to that mitigation, we would
2 basically be removing effects to the water body and water
3 courses. There'd be no in-stream works as a result. And
4 if we're removing effects we feel that there's not a need
5 to identify all the habitat and habitat features and
6 fisheries components of those streams because we're
7 basically removing the interaction between the project
8 and the environmental component, so there wouldn't be an
9 effect to assess. So that's the approach we've taken by
10 using that -- committing to that mitigation measure.

11 Now recognizing that we haven't mapped
12 every stream, we've done a preliminary count on the
13 number of streams and water body crossings which is
14 presented in the DAR.

15 Prior to detailed design there will also
16 have been flown LiDAR mapping of the area and that will
17 pick up all the streams and water body crossings on a map
18 scale specific for this project so that we won't be
19 relying on the generic map sheets that are available.

20 And from that information we will be able
21 to -- or the construction contractor will be able to use
22 the operational statements and commit to that because
23 they will know exactly where all the stream crossings and
24 water bodies are located.

25 Coupled to that, if in the result that for

1 some reason, and -- and recognizing that the best
2 planning doesn't always go according to plan -- for some
3 reason there is determined to be a need and no way around
4 it to encroach on a water body, if that were to occur,
5 and this is also noted in the DAR, that works would not
6 proceed without taking that issue and a construction
7 management and mitigation plan to the agencies because
8 basically recognizing that there's legislation around
9 doing in-stream works without having primarily
10 authorization from DFO and other agencies. So Deze would
11 not proceed with works that obviously are unauthorized.

12 Yes, Louie has also noted that there is a
13 lot of flexibility in where the poles can -- where the
14 actual towers can be located right down to during the
15 detailed design process but also during the -- in the
16 field surveying the location. There's flexibility to
17 move those poles laterally or horizontally around the
18 alignment to -- again to remove the poles from any in-
19 stream environments or sensitive habitat.

20 And I guess to continue on, there was a
21 second half to your question as how would we assess
22 alternative alignments being that we've removed the
23 interaction and basically mitigated the effect.

24 And that would be the same process used
25 for any overland alignments and then we don't have an

1 effect to mitigate or an effect to assess.

2 MS. TAWANIS TESTART: Does that answer
3 the question for you, Mr. Stewart? You look puzzled
4 and/or --

5 MR. BRUCE STEWART: It -- it answers the
6 question of -- of how Deze is -- is proposing to approach
7 the problem of transmission lines. I'm not sure that I
8 agree with it.

9 MS. TAWANIS TESTART: Okay. You can
10 explain to me why after. Do you need more information to
11 -- to come to an agreement or do you simply disagree with
12 some of the suppositions that they've made?

13 MR. BRUCE STEWART: My -- my concern is
14 if there -- there is no way of assessing whether there
15 may have been an impact related to construction if there
16 are mistakes made or of assessing whether moving the
17 route one way or another might be worthwhile as a means
18 of -- of avoiding a particularly sensitive fish habitat.

19 MS. TAWANIS TESTART: Right. Did you
20 want to respond, Linda?

21 MS. LINDA ZURKIRCHEN: I certainly can
22 respond. I -- probably it's more valuable to a -- I
23 would say to a sidebar discussion. I'm not sure those
24 are -- are permitted with the Review Board's people --

25 MS. TAWANIS TESTART: No.

1 MS. LINDA ZURKIRCHEN: -- or experts. So
2 I think we can say that, you know, the essence of how it
3 would avoid is that one other component that I didn't
4 mention and that's also in the DAR is to have
5 environmental monitors on site during construction.

6 And certainly environmental monitors would
7 be able to report on whether there are any upcoming
8 potential or -- I'll back up -- that environmental
9 monitors would be knowledgeable of what is happening or
10 what is going to happen in construction days or weeks
11 prior to that.

12 They would be onsite during construction
13 and so they would be able to be onsite during areas of
14 potential sensitive habit, during any near stream works
15 that would have a higher risk to either sensitive habitat
16 or higher risk to having an issue that may contaminate
17 the water quality or disturb a particular site.

18 And they would have ability to report that
19 back or work with the agencies and the design team and
20 the contractor to mitigate, change a design feature, or -
21 - and/or work with the agencies to best mitigate any
22 potential impact before it becomes an effect.

23 MS. TAWANIS TESTART: Does that satisfy
24 your question?

25 MR. BRUCE STEWART: Yes, it does.

1 MS. TAWANIS TESTART: Do you have
2 another question?

3 MR. BRUCE STEWART: I have a lot of
4 them. My next question is relating to blasting. And
5 Deze plans to use a hundred metre buffer for in-stream
6 blasting, as mentioned in Table 10-2, and to isolate
7 areas affected by blasting from fish.

8 And I wonder how this will be accomplished
9 at the intake and outfall of the new channels?

10 MS. LINDA ZURKIRCHEN: Linda --

11 MS. TAWANIS TESTART: Go ahead, Linda.

12 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
13 I have not actually reviewed that section in detail, but
14 by my -- the way your IR is -- is posed, I feel we
15 probably have misrepresented information in the DAR.

16 Obviously it's impossible to blast
17 something without -- while being a hundred metres away
18 from it. So, recognizing that, we have -- have not
19 presented the information accurately.

20 There is going to be blasting. In-stream
21 blasting refers to blasting that may occur in the -- in
22 the area or within a water body but that -- we talked
23 about the water body would be in a construction zone and
24 maybe the works may occur in the dry. But the process of
25 blasting would be, basically, a channel out into the --

1 the -- what's the word I'm thinking of? The rock
2 material that is under water.

3 So there are some different construction
4 techniques that could be used. Certainly one (1) of
5 those is different blasting materials and products that
6 could be used to mitigate potential effects associated
7 with -- with blasting.

8 I will just, sort of, stop there, being
9 that I think there's a lot of -- there has -- recognizing
10 some of the other IRs that there's a lot of questions
11 around blasting and blasting techniques and whether we
12 want to talk about those tomorrow or continue now.

13 MS. TAWANIS TESTART: Yeah, I think that
14 Bruce will -- will take that question and perhaps re-pose
15 it tomorrow in the context of the discussion that we will
16 have around construction techniques and project design
17 and those sorts of things. And today, we'll just focus
18 on impacts to the watershed, water quality, and -- and
19 fish impacts.

20 Thank you, Linda, for moderating for me.

21 MR. BRUCE STEWART: Okay. I'll table
22 the rest of that question for tomorrow. Like DFO, I have
23 concerns about the aquatic baseline. My main question
24 is: Is the aquatic baseline sufficient for use later on
25 to detect whether changes are occurring, and if so, at

1 what level?

2 MR. SHANE UREN: Shane Uren. We feel
3 that the baseline data collected and presented in the DAR
4 is sufficient for the completion of the Environmental
5 Assessment.

6 And moving forward, what we're working on
7 now is a program that identifies areas where additional
8 information is warranted. And that would feed into a --
9 a program, a monitoring program that would allow us to
10 detect changes associated with the project.

11 MS. TAWANIS TESTART: Bruce...?

12 MR. BRUCE STEWART: Following up on
13 that, I -- I'm wondering whether the sample sizes that
14 you will generate, both -- both what -- what you have
15 presently and what might be done between now and -- and
16 project startup will be sufficient to differentiate
17 natural variation from project-related effects. This --
18 this touches on monitoring but -- but it's -- it's
19 important, as well, for assessing things now as DFO has -
20 - has presented.

21 MR. SHANE UREN: Well, the goal of our
22 plan will be to be able to -- to do that, to identify
23 project-related changes and we hope to develop that plan,
24 a robust plan with these parties here to do that.

25 And to answer the second part, we felt --

1 we feel that the -- the baseline data we have or the
2 current data that we have on the environment is
3 sufficient to complete an effects assessment for -- for
4 the environmental assessment process.

5

6 (BRIEF PAUSE)

7

8 MS. TAWANIS TESTART: You continue to
9 look puzzled, Bruce. I'd like to point out to Deze that,
10 just to clarify, that sidebar meetings or additional
11 conversations with the Review Board experts won't be
12 permitted.

13 So if additional information is required
14 to understand the questions at hand, we do need to get
15 responses in writing to be able to follow up on the
16 issues. And we also need to clearly identify what
17 additional information requirements might be.

18 MR. BRUCE STEWART: That would be useful.
19 I -- I expect that a lot of this will also be dealt with
20 by DFO in the sidebar meetings and -- and come out that
21 way.

22 My next question is related to mercury
23 uptake by lake trout. The modelling that was done by
24 Deze used a proxy, used lake -- lake whitefish as a proxy
25 for lake trout in determining mercury uptake.

1 Now these fish have very different diets
2 and in the past, lake trout have typically had mercury
3 levels that were anywhere from four (4) to five (5) times
4 those of lake whitefish. And I wonder if the Proponent
5 can -- can rerun the model using data from lake trout or
6 another top level predator to generate a revised estimate
7 of how lake trout tissue mercury might be affected by
8 future development?

9 MR. SHANE UREN: Shane Uren. Just to
10 clarify, the model was run for both lake trout and for
11 whitefish. The model uses in the -- in the calculations
12 two (2) empirical values that are directly related to a
13 certain species of fish and that's where we applied those
14 empirical values for whitefish to lake trout in the
15 development of that model.

16 Within that model, as well, there's the
17 background information we have on mercury levels from
18 lake trout were used to run the model. Where we had to
19 use proxies is for those two (2) parameters, B subscript
20 1 and B subscript 2, which are empirical values that were
21 developed by I think it was Johnson. And that was the
22 only overlapping species from the model development that
23 were similar to fish within the Taltson.

24 So what we could do is, first of all,
25 investigate those empirical values a little further to

1 see if -- if we have some information that we could -- we
2 could make use of that and, if not, then take a look at
3 the fish species that were used, some of the other fish
4 species that were used in the development of the model,
5 to see if there's a better empirical value that's more
6 appropriate to lake trout. So that's something we can --
7 we can do.

8 MS. TAWANIS TESTART: So is that
9 something that you're committing to doing at this time?

10 MR. SHANE UREN: Yeah, we're committing
11 to that.

12

13 --- COMMITMENT NO. 14: Deze Energy to investigate
14 the empirical values further
15 to see if they have some
16 information that they could
17 make use of that. And if
18 not, look at the other fish
19 species that were used to see
20 if there is a better
21 empirical value that's more
22 appropriate to lake trout

23

24 MR. SHANE UREN: And I'll just -- I'll
25 just add a little bit there just for the model. What

1 we've done with that model there, we've use background --
2 or collected information from Nonacho Lake and Taltson
3 Lake, applied these levels to this model, and run that
4 model in -- in a conservative nature and look -- and
5 looking at the results of that model. And -- and, Bruce,
6 you're probably familiar with it. It's a very minute
7 change that we're anticipating. And that stems to the --
8 you know, to the nature of the project here.

9 This -- this is not a new flooding
10 project. This -- the -- the potential for additional
11 mercury, as we understand it from the literature, is
12 related to the variations in water levels. So right now
13 the highest water level that we have, based on our flow
14 records on Nonacho Lake, will not be exceeded under the
15 operations of the project, nor will the lowest level.

16 What will change is how often the water
17 levels get high and how often they get low, so to speak,
18 so the range. So it'll fluctuate more often under the
19 project than it currently does.

20 So what does that mean? That -- that
21 means that there's a potential there to stir up the
22 sediments that are in this zone of fluctuation.

23 And then those sediments, once they're
24 stirred up through that process of water management, need
25 to make their way down to the bottom of the lake where

1 we're -- where through time anoxic conditions or no --
2 low -- very low oxygen conditions will occur to -- to
3 mobilize that mercury into the -- into the -- into, I
4 guess, the food chain.

5 That and, as well, any -- any -- it's
6 methyl mercury, so it's the readily -- it's the -- the
7 more -- the form of mercury that's readily taken up by
8 aquatic biology or, sorry, by aquatic organisms. So it's
9 a stirring up of elemental mercury and methyl mercury,
10 getting that down into the bottom of the lake and getting
11 that into the food chain.

12 So that in and of itself is not, based on
13 what we're reading from the literature, is not as a
14 dramatic impact to mercury levels as one would expect
15 from new flooding, for example. So it's a -- it's --
16 it's -- we're applying a model of mercury uptake to a
17 system where the changes of the product -- from the
18 project are quite a bit less in terms of mercury -- the
19 addition of mercury or the release of mercury into the
20 system than typically is the case in a new development
21 where you're flooding a new area, a new terrestrial area.

22 So in and of itself, applying that model
23 and making predictions of mercury levels is a
24 conservative nature. So we run that, we've looked at the
25 -- the information and assume that we're flooding new

1 areas, and I can confirm that with the model.

2 So we've taken that conservative approach,
3 that these ranges of water levels, we -- we've looked at
4 that range and we said that's new flooding when, in fact,
5 it's not new flooding, it's just disturbing the
6 sediments. And what the -- the literature tells us with
7 new flooding would do to mercury levels we've applied
8 that to this project and then ran that model.

9 And the results of that model show that
10 there's very little, if any, change. I think within the
11 error of that model, it's very low. So regardless, we'll
12 still take a look to see if we can't apply a better
13 empirical value than what we've got, given the
14 differences that Bruce has outlined between whitefish and
15 lake trout.

16 MS. TAWANIS TESTART: All right. Does
17 that satisfy your information queries to that question?

18 MR. BRUCE STEWART: Yes. But I would
19 follow that up with: How will your -- how will you test
20 these predictions? Will there be sampling in monitoring?
21 Certainly, there isn't any identified at present.

22 MR. SHANE UREN: Shane Uren. Yeah, we --
23 what we're working on now is given kind of what I
24 outlined of potential -- the potential for mercury, how
25 it would get into the system in addition to what's there

1 now or make its way into the food chain. Given that, we
2 feel the area that we should focus on is the mercury
3 levels in the sediments because that's where this -- this
4 mercury that's in the zone of fluctuation will make its
5 way down into the sediment to add to levels of mercury
6 that are currently there.

7 So by -- by collecting more information on
8 mercury levels in the sediment, we feel that's a good
9 indication, that's the -- the grass roots, so to speak,
10 of how it would get into the system. So that's what
11 we're looking -- looking -- looking at right now and
12 working on a plan internally as part of our monitoring
13 program that we'd like to release as a -- as a terms of
14 reference.

15 MR. BRUCE STEWART: Again, this -- this
16 goes back to the monitoring program, but I think there
17 are quite a few steps between mercury and the sediment in
18 mercury in the fish which can reach other animals and
19 people.

20 And I think in the monitoring it might be
21 worth addressing very clearly your rationale for doing
22 sediment only as opposed to sediment and fish.

23 MR. SHANE UREN: Okay. Noted and we will
24 -- we'll do that. We'll formulate a response as to why
25 we feel the sediment monitoring would be sufficient, at

1 least as an initial step for a monitoring program,
2 whereas adaptive management might take that to
3 invertebrates and then fish potentially in there.

4 MS. TAWANIS TESTART: And you'll provide
5 that information by the end of the month.

6 MR. SHANE UREN: Yes.

7 MS. TAWANIS TESTART: Yes, okay.

8

9 --- COMMITMENT NO. 15: Deze Energy to explain why
10 they feel sediment monitoring
11 would be sufficient
12

13 MS. TAWANIS TESTART: And thank you for
14 the brevity of that response because it's noon. So I
15 think we're going to adjourn for lunch and come back
16 together here at 1:15 if that's all right with everyone.

17 And I'd like to thank everyone for their
18 participation and for all the good questions and I hope
19 to see you all back here. And feel free to ask any other
20 questions that you might have that have come out of these
21 discussions that we're -- we're all listening to.

22 Thank you everyone.

23

24 --- Upon recessing at 12:00 p.m.

25 --- Upon resuming at 1:16 p.m.

1 MR. CHUCK HUBERT: Okay, if we can take
2 our seats, please, and begin again our afternoon session.

3 Again, we'll be discussing impacts to the
4 Taltson watershed this afternoon and just to remind
5 everybody that the meeting is being transcribed and we
6 encourage clear and concise questions and sufficient time
7 after that for any discussions in order to arrive at
8 answers that satisfy those who are asking the questions
9 and the origin of the question.

10 And again, if questions cannot be answered
11 during this meeting, we encourage sidebar discussions or
12 separate discussions away from this table and the option
13 for a written response as well by October the 30th.

14 So if you recall this morning we had begun
15 with the Review Board experts asking some questions of
16 the developer, so, if we can continue with that now it'd
17 be great.

18

19 (BRIEF PAUSE)

20

21 MR. CHUCK HUBERT: And --

22 MR. BRUCE STEWART: Bruce Stewart. My
23 next question was related to Inconnu. There are
24 historical accounts that describe Inconnu as plentiful in
25 their fall migration into the Taltson River in September

1 and October and I wondered if during your studies you had
2 looked into that and also whether through your collection
3 of traditional knowledge that you had looked into that as
4 well.

5 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
6 Yes we've looked a little bit into Inconnu. There's not
7 a lot about that in the DAR because our -- the
8 information we have indicates that they are down in the
9 very lower sections of the Taltson River in/and near the
10 confluence of Great Slave Lake.

11 And the modelling that we have and the
12 effects of the project are minimal to negligible in that
13 area of the Taltson River, so, there's not a lot of
14 information contained in the DAR about that but that's
15 the reason is that our information indicates that we're
16 not -- the project effects are not reaching the area of
17 Inconnu and there's -- then there's no interaction
18 between the species and the project.

19 MR. BRUCE STEWART: Would your studies
20 have -- have picked up Inconnu in the fall up close to
21 the project?

22 MS. LINDA ZURKIRCHEN: The past studies
23 that have been completed haven't picked any up. Part of
24 that -- and Don, can I ask you to speak a little bit?
25 Would that be putting you on the spot to speak a little

1 bit about Inconnu in the Taltson River and let us know
2 why you know about Inconnu and the information you've
3 been able to provide to us about them?

4 Just their habitat and what they do and
5 just one of our -- our sources of information on the --
6 the Inconnu in that area.

7 MR. DON BALSILLIE: Thank you. Good
8 afternoon, Don Balsillie. The information that we've got
9 with reference to that particular species in that
10 location of the river is basic information that we've
11 acquired from talking to Elders that reside in the area
12 for many years.

13 So it's traditional knowledge that I'm
14 referring to at this point, as well as personal knowledge
15 having fished the area for a number years.

16 But, prior to the establishment of the
17 current infrastructure on this river system, the
18 knowledge that we have from Elders that traversed the
19 area, trapped up in the area and lived in the area on
20 that river system, the Inconnu did come up to the first
21 set of rapids on the river. It's Little Rat River. And
22 Inconnu stocks were quite plentiful and at that time, in
23 our history, there was a great deal of commercial fishing
24 happening on Great Slave Lake, that was the peak of the -
25 - of the fishery.

1 The fishery declined -- I'll step back a
2 little bit. The commercial fishery on Great Slave Lake
3 began on July 4th, 1942; that was the first commercial
4 fishing net that was set on Great Slave Lake. And the
5 peak of the fishing industry was right around the '60s
6 and started to decline in the mid '70s. And Inconnu
7 stocks at that time were notable in, I think, it's
8 fourteen (14) different locations on Great Slave Lake.
9 And one of them including the -- the mouth of the Taltson
10 River and quite plentiful on Great Slave Lake. The
11 stocks were depleted quite dramatically due to the
12 commercial fishery. When the stocks were declining, it
13 was right around the time that the infrastructure that I
14 referred to was being built at that time. So it was
15 noticeable that the stock disappeared from that area.

16 Over the last, I would say, six (6) to
17 seven (7) years and most notably in the last three (3),
18 the Inconnu stocks are coming back in that water shed.
19 They're coming back around the mouth of the river. I
20 fish down at that location for the last twenty-four (24)
21 years from anywhere between the beginning of May till the
22 end of September. And we've been picking up that species
23 in the last number of years, a bit more than we have
24 prior to those particular years.

25 So, they are coming back mainly due to the

1 fact that the commercial fishery is, as I said, declined
2 dramatically and they put a non-commercial fishing zone
3 just a zone in there for domestic purposes. So that's
4 helped the stocks come back.

5 So, if you take a look at the history of
6 this particular species and what implications the -- the
7 dam has had on the species, there's no known data that
8 can -- can be referred to as here are the reasons, other
9 than the ones I spoke to in terms of the commercial
10 fishery.

11 As well, there was some taking of the
12 stocks, of course, when residents did reside in the small
13 community of -- of Rocher River up until the -- the mid
14 '60s when most of the residents did have to move from the
15 small community into larger centres for the purposes of
16 having their children attend school, et cetera, and
17 medical purposes.

18 So, today if you were to go into the area
19 that the Inconnu stocks do -- do migrate into, it's --
20 I've asked the guys up river if they've seen them further
21 up river in the last while, if they netted them or
22 anything, they haven't -- they haven't been moving in
23 that direction in the last while.

24 Hopefully the stocks do come back in big
25 numbers because they were there, like I said, in the past

1 according to the Elders, in great -- great numbers.

2 So, that's my long-winded answer, I guess,
3 to -- and they -- they are a very delicious fish. If you
4 smoke them just right. I can give you a recipe sometime
5 when you're not too busy. But, they are a beautiful
6 fish. As you're well aware, I mean, they -- they are in
7 the Mackenzie River and parts of Russia. They're
8 referred to as Inconnu. In our part of the world people
9 refer to them as Cony, Shefish (phonetic), but they're
10 mini -- they're almost like a mini type of Tarpan.

11 They're very soft mouthed, they're very shiny -- almost
12 like a giant whitefish. But a very nice species of fish
13 that the commercial fishery did go after and target fish.

14 In terms of our useage of that particular
15 species, back in the days when people lived off -- lived
16 off the land more so than they do today, they -- they
17 hung a lot of these fish. They would net them and -- and
18 hang them on stages because they were so rich, in terms
19 of fatty, being rich that they were a good source of --
20 of food for their dog teams, as well as they use them for
21 -- for baiting their traps because they're a very rich
22 and oily type of fish. Today, it's mostly Whitefish that
23 people go after for -- for consumption.

24 MS. LINDA ZURKIRCHEN: Can you just
25 remind me where the -- where the first set of rapids is

1 on the -- on the river? It's --

2 MR. DON BALSILLIE: The first set of
3 rapids --

4 MS. LINDA ZURKIRCHEN: -- is it around
5 the Rat -- is it --

6 MR. DON BALSILLIE: Just around the
7 Little Rat River.

8 MS. LINDA ZURKIRCHEN: The Rat.

9 MR. DON BALSILLIE: Yeah. Up about
10 approximately twenty-five (25) kilometres up the river,
11 upstream. Twenty-five (25) miles, sorry.

12 MR. CHUCK HUBERT: Thank you very much
13 for that explanation of Inconnu. First, did you -- is
14 that answer sufficient for your purposes?

15 MR. BRUCE STEWART: That was very
16 helpful.

17 MR. CHUCK HUBERT: Please continue then.

18 MR. BRUCE STEWART: My next question is
19 related to fish mortality from entrainment and turbines.

20 We've already talk about possibilities for
21 screening turbines. I guess I would be interested in
22 learning more about what sort of screening is -- is
23 possible for the penstocks or the entrance to the -- the
24 channel?

25 And then I have other questions.

1 MS. LINDA ZURKIRCHEN: Do you --

2 MR. CHUCK HUBERT: Please.

3 MS. LINDA ZURKIRCHEN: Do you want me to
4 answer just that one, or would you rather we go through
5 all the entrainment?

6 I guess I get look at Bruce and saying
7 that, are they all related, and should I answer them in
8 one (1) package, or do you want me to answer them
9 individually, the entrainment questions?

10 So, we can -- we can start with that one.

11 MR. BRUCE STEWART: Well, I -- I can run
12 through them all if you -- if you want.

13 MS. LINDA ZURKIRCHEN: What do think
14 would be easier?

15 MR. ALAN EHRLICH: For the sake of the
16 record, we'd like to keep these responses as -- as clear
17 as possible.

18 And if it's all right with you, I think it
19 might be helpful if you can go one (1) question at a
20 time. We get one (1) answer at a time, get them checked
21 off, and keep on trucking.

22 MS. LINDA ZURKIRCHEN: Okay.

23 MR. ALAN EHRLICH: Thanks.

24 MS. LINDA ZURKIRCHEN: Okay. Maybe can --
25 Tom, can you talk to the screen that's on the -- in the

1 design at this point in time?

2 MR. TOM VERNON: Okay. Tom Vernon. I
3 think the question was, what is proposed now that -- that
4 might have been asked previously -- what is in the
5 current conceptual design?

6 It's not finalized by any means, would --
7 would be probably for this facility a hundred (100)
8 millimetre, kind of, rack spacing. It's really a trash
9 rack to block debris going into the turbines.

10 So, a clear spacing of about one (100)
11 millimetres over the entire intake area.

12 MR. CHUCK HUBERT: Is that an adequate
13 answer for you, Bruce?

14 MR. BRUCE STEWART: It -- yes. The --
15 the other questions I have are more related to actual
16 turbine mortality for fish that either get through the
17 racks or if their rac -- racks aren't feasible.

18 The first one is: How have mortality
19 estimates included both direct immediate mortality and
20 indirect delayed mortality from injury?

21 Have you been able to generate estimates
22 of later death, for example, for fish that are -- are
23 slightly damaged, whether they be large or small, that
24 might later die or disease or injury?

25 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.

1 The information we have, and I -- I will have to go back
2 and review, but I -- I'd have to check if the formula
3 that we've used, that's been referenced through
4 literature reviews, to calculate mortality through
5 turbines, I believe includes a component of mortality
6 from injury, as well as direct mortality. But I can
7 confirm that for you and certainly will.

8

9 --- COMMITMENT NO. 16: Deze Energy to indicate how
10 mortality estimates included
11 both direct immediate
12 mortality and indirect
13 delayed mortality from injury

14

15 MS. LINDA ZURKIRCHEN: Other than that,
16 we -- the -- there is not -- there is very, very little
17 information literature available in regards to mortality
18 through turbines from injury, specifically, in regards
19 to the non-migratory species that we are -- are looking
20 at.

21 And I think one (1) of the reasons that we
22 get from the literature is because there is -- the -- the
23 -- the number of spe -- of fish that actually get
24 entrained and -- and injured or deceased through the
25 turbines when -- for these non-migratory species is very,

1 very, low.

2 And therefore, the information and that's
3 -- that's available for that is -- is very low because
4 it's not a species that's being looked at. And I do have
5 some entrainment papers with me that you're welcome to
6 look at that we've used as reference material.

7 MR. ALAN EHRLICH: I -- Bruce, I'd like
8 to jump in for a second there. When you say that some of
9 the papers deal with mortalities, the fish that are being
10 killed when they hit the turbines --

11 MS. LINDA ZURKIRCHEN: Yeah.

12 MR. ALAN EHRLICH: -- as well as dealing
13 with injury leading to mortality --

14 MS. LINDA ZURKIRCHEN: Yeah.

15 MR. ALAN EHRLICH: -- which says to me a
16 fish that's injured by the turbine and then dies from
17 that injury. But as I heard Bruce's question it was all-
18 related mortality including an injury followed by, say,
19 an infection, you know, secondary --

20 MS. LINDA ZURKIRCHEN: Mm-hm.

21 MR. ALAN EHRLICH: -- indirect mortality.

22 MS. LINDA ZURKIRCHEN: Mm-hm.

23 MR. ALAN EHRLICH: Does the material that
24 you looked at cover that? Do you have a way of
25 estimating that?

1 MS. LINDA ZURKIRCHEN: No. We don't have
2 a way of estimating that because -- mainly because the
3 literature is not there to support it. There -- there is
4 -- and I think it stems back to that we have not been
5 able to -- to find any literature supporting those
6 investigations and studies that are in regard to
7 mortality from injury. Either they don't exist or
8 they're not in the published database that we can find
9 very little information on that subject.

10 MR. ALAN EHRLICH: In that case, could
11 you please provide us hopefully -- no, I won't say --

12 MS. LINDA ZURKIRCHEN: Mm-hm.

13 MR. ALAN EHRLICH: -- before the end of
14 October with your best reasonable prediction. I
15 understand that you can't rely on secondary information
16 sources, but you're in a good position to -- to think
17 about this, you know, with your background in fish and
18 your knowledge of the project and come up with the most
19 reasonable prediction you can because I think it's an
20 important question.

21 MS. LINDA ZURKIRCHEN: Yeah. We -- we
22 can make an attempt. I'm -- I'm not going to commit to
23 having a prediction, and if we don't we can certainly
24 rationalize why we're not giving you a prediction, and it
25 would -- it would be related to the inability to hav --

1 to get access to study matter, indications, data that
2 would allow us to make those predictions.

3 MR. ALAN EHRLICH: Sure. And of course
4 during an assessment the onus is on the developer to
5 establish --

6 MS. LINDA ZURKIRCHEN: Yeah.

7 MR. ALAN EHRLICH: -- that they're not
8 going to cause significant adverse environmental impacts.

9 MS. LINDA ZURKIRCHEN: Yeah.

10 MR. ALAN EHRLICH: So it's worth giving
11 us what you can --

12 MS. LINDA ZURKIRCHEN: Yeah.

13 MR. ALAN EHRLICH: -- bearing, you know,
14 that as the context.

15 MS. LINDA ZURKIRCHEN: Yeah. And I think
16 -- I'll -- I'll just let Louie make some comments, too --
17 and I think that's why another reason that we have not
18 gone down that step is because the information that we
19 have and the information that's presented in the DAR --
20 and I can provide supporting information to that,
21 certainly will provide that, is that the level of
22 mortality, whether direct or indirect, is not significant
23 to the populations upstream and downstream.

24 Because we're not -- as -- as we talked
25 about earlier that we're -- the fish that choose to go

1 downstream or move downstream for reasons mig -- as we
 2 spoke about, these aren't migratory fish, we don't expect
 3 that there would be any additional movement downstream
 4 because we're not increasing the flows downstream, so,
 5 the upstream populations wouldn't experience really a
 6 negative -- any negative effect, let alone a significant
 7 negative effect.

8 Same for downstream populations, looking
 9 at the downstream populations that because they're not
 10 migratory the populations aren't sourced for -- from
 11 upstream species moving downstream to populate the
 12 downstream habitats, so, that there would not be a -- a
 13 negative effect, let alone a significant negative effect,
 14 to the downstream populations either. I don't know --

15 MR. ALAN EHRLICH: Bruce, are you -- are
 16 you satisfied with that or should we ask for -- still
 17 expect more detail in a written response?

18

19 (BRIEF PAUSE)

20

21 MR. BRUCE STEWART: I -- I think that it
 22 would be helpful to have a -- have more detail in a
 23 written response. What I think is also important is --
 24 is to look at a number of other aspects of mortality --

25 MR. ALAN EHRLICH: Okay.

1 MR. BRUCE STEWART: -- that maybe follow
2 from this as well.

3 MS. LINDA ZURKIRCHEN: I -- oh, okay.

4 MR. BRUCE STEWART: I guess in -- you've
5 made your predictions on the basis that the fish are non-
6 migratory but -- and I -- I recall that there was a
7 comment that lake trout would be on the bottom at the
8 time during the winter and less likely to be entrained
9 and that sort of thing.

10 I think that there needs to be more
11 consideration of the spacial distribution of the fish and
12 -- and of their movements and, I guess, I wonder whether
13 the data that you have in hand is -- is suitable for that
14 or whether you're able to gather more data from the
15 literature, particularly with respect to lake trout.

16 One (1) of the things that happens when --
17 when an animal or a fish is removed is another one comes
18 in to takes its place often. So, it may -- the fish --
19 fish may not migrate in large numbers but they're moving
20 all the time so that -- that as you remove fish from the
21 entrance to the channel another one may move in and --
22 and possibly proceed down, too, so it's -- it's not a
23 simple question I guess.

24 So I would be interested in more
25 information on that.

1 MS. LINDA ZURKIRCHEN: Okay, and -- and
2 we can get the information that we can on that matter.
3 I'm not, I guess from my perspective and seeing the --
4 the low potential for movement through there if fish are
5 moving at random into -- in their preferred environments
6 in that area, it's such a small area in comparison to the
7 -- the entire Forebay, I -- I can't draw the link to how
8 that could be an effect or, you know, more than a
9 negligible effect to the populations.

10 And I guess just making sure -- I -- my
11 question then would be, are we speaking to the -- the
12 valued ecosystem component of fish populations or are we
13 looking at individual species and numbers of species not
14 denying that there is a potential to have some effect on
15 individual fish. We've gone through the numbers and in
16 the DAR it's presented as, you know, present survival
17 through the turbines.

18 Even if we add on the potential for post
19 mortality after injury, I still don't see -- for me it's
20 a far -- still a far link to go from that level of impact
21 to an impact on populations.

22 MR. BRUCE STEWART: I -- I think it's --
23 at two (2) levels it's both your class effect, so, that
24 if you have small young fish that happen to be there in a
25 concentration and do get swept down and also population

1 effects what -- what effect their entrainment might have
2 in the long term.

3 I think in -- in -- further to that the
4 mortality of large fish wasn't factored into the analysis
5 and I think it's important to look at that. One (1) of
6 my questions was: At what length you get 100 percent
7 mortality, for example, so that you have a sense of if
8 anything does get down and -- and get entrained and is it
9 completely gone or -- or is it -- is it possibly just
10 damaged?

11 The -- the large -- the loss of large fish
12 often can have a -- a greater effect than the loss of
13 small fish because you lose the spawning potential of the
14 fish and that's -- that's significant.

15 MS. LINDA ZURKIRCHEN: And I can say that
16 we -- we can provide that information to you. We have
17 run through that -- those numbers and I can certainly
18 give that information.

19 MR. CHUCK HUBERT: Okay, so that's a
20 commitment to provide the response in writing by October
21 30th?

22 MS. LINDA ZURKIRCHEN: Yeah, the
23 calculations for the mortality on large fish.

24 MR. ALAN EHRLICH: And -- and your --
25 your views on the potential impacts that we were talking

1 about earlier.

2 MS. LINDA ZURKIRCHEN: Yeah, what we're
3 talking about here.

4 MR. ALAN EHRLICH: Yeah.

5 MS. LINDA ZURKIRCHEN: Yeah, we'll
6 certainly provide that information and our perspective
7 and our rationale for that.

8 MR. ALAN EHRLICH: Thank you.

9

10 --- COMMITMENT NO. 17: Deze Energy to provide
11 calculations on the mortality
12 on large fish and views on
13 potential impact

14

15 MS. LINDA ZURKIRCHEN: And just one (1)
16 comment that Louie had suggested is just some -- Dan, I
17 don't know if you'd want to speak to your experience
18 about working in and around turbines and what you've
19 noticed on these -- this style of turbine that's being
20 used for fish mortality.

21 If you feel like speaking to that, Dan
22 spent a number of years working at the turbines.

23 MR. DAN GRABKE: Sure, Dan Grabke. This
24 is anecdotal but it's from personal experience. I lived
25 out at Snare for -- Snare Hydro for four (4) years and

1 was actively engaged in the operation of it for about
2 twenty (20) years as well as a little, I don't know, some
3 visits to -- to Taltson Hydro.

4 And my experience is that there is fish
5 mortality mostly just in startups and -- and shutdowns --
6 startups, actually. If the units stop for a while and --
7 and fish swim up into the turbine and then it starts, the
8 immediate, initial spinning of the turbine results in
9 some fish death, very infrequent ones. I've seen a few
10 fish killed that way.

11 I've also experienced a lot of -- of
12 actually watching the fish swim into the intake and then
13 swim back out because the velocities are quite slow. It
14 doesn't seem to -- it doesn't suck them in or anything
15 else. You can just look down and watch them and they're
16 just moving back and forth in and out of the -- in and
17 out of the pen stock and so those are just some of my
18 observances.

19 MR. CHUCK HUBERT: Okay, thanks for those
20 observations. Bruce, do you want to continue?

21 MR. BRUCE STEWART: Yes, I guess that
22 actually leads to another question and, that is, the
23 channel velocities, will they be -- how -- how wide are
24 the range of changes in velocity so that there's a sense
25 of -- of the -- how they relate to fishes' swimming

1 ability.

2 MR. TOM VERNON: Tom Vernon, I can make
3 some comment on that. I think our current design
4 guideline on that reaches a maximum channel velocity of
5 about 0.3 metres per second. We need very low velocities
6 even at peak design output to facilitate ice cover in the
7 canal. We -- we need that to form. We do not want
8 turbulent or fast running water in -- in the canals or in
9 the -- any of the canals. So, as a consequence of that,
10 yeah, you'll -- you'll typically design for velocities of
11 about a foot per second and -- and much slower obviously
12 at reduced plant outputs.

13 MR. BRUCE STEWART: Will that vary
14 seasonally at all or is that really quite steady?

15 MR. TOM VERNON: Very -- obviously, we
16 desire to keep things quite steady. It -- there will be
17 some variation seasonally but that's a peak, so, it would
18 be less than that on a seasonal basis.

19 MR. CHUCK HUBERT: Thank you. Is that
20 answer sufficient for you, Bruce?

21 MR. BRUCE STEWART: Yes, and I've got one
22 (1) last tidbit to ask Dan and that was are -- was the
23 Snare hydro project using the same turbine design as --
24 as is being used currently at Taltson or as is planned?

25 MR. DAN GRABKE: The turbine design for

1 Taltson hasn't actually been optimized yet, whether it's
2 Francis or Kaplan turbine. I think most of our research
3 was done on Kaplan. Snare Hydro has both Kaplan and
4 Francis. Kaplan is a, like a propeller-type turbine and
5 Francis is more almost a bucket wheel sideways-type
6 turbine but Snare has both and Kaplan spins at a slighter
7 higher rpm generally.

8 MR. BRUCE STEWART: Thank you. That's it
9 for my questions.

10 MR. CHUCK HUBERT: Okay. Thank you for
11 those responses and thanks for the questions, Bruce.

12 So does that conclude the questions from
13 the Review Board experts? Okay. Aleksey please.

14 MR. ALEKSEY NAUMOV: My name is Aleksey.
15 And I'm working for the SENES and as for the Review
16 Board. And I have a few questions on the hydrologic
17 model, the Taltson Basin flow model. It's a three (3)
18 part question that may require some detail, maybe face
19 meeting, but I'll state it anyway.

20 The calibration and validation of the
21 basin flow model, it's covered in the DAR in Section 9
22 and also in the Appendix. But the -- it's not completely
23 clear how that model was calibrated and validated.

24 Specifically this is a three (3) part
25 question. I'll state the first one. First the -- could

1 you elaborate on which model parameters were measured,
2 observed, versus those calibrated or still was perhaps
3 assumed?

4 MR. TOM VERNON: Tom Vernon. Yes, I can
5 try and answer that question. Just as a preamble I think
6 calibration may be a word that's used in the reporting
7 that's probably a little bit of over sophisticated word
8 for what we're able to do with the basin model. It's --
9 I think the runs that -- or the particular run that
10 you're referring to would -- I'd prefer to call it a
11 validation run.

12 It's really seeing how the -- the model
13 reproduces a set of flow data in -- in several points in
14 the basin with a particular set of assumptions, field
15 data incorporated into rating curves for hydraulic
16 controls and utilizing the input hydrographic data that
17 is either available from Water Survey of Canada gauging
18 or that we created specifically for the basin given that
19 there's a lot of inputs that weren't -- that aren't
20 gauged.

21 So, I'd offer that there's really very
22 little in the way of our ability to calibrate things. It
23 wasn't as though we did this run and then went back and
24 tweaked. We have the ability to tweak a bunch of
25 parameters. I think the report is fairly clear on how

1 the -- the model parameters are defined.

2 My understanding in talking to our -- and
3 I didn't do this modelling myself, but my understanding
4 is that we did not go back in and alter things to get
5 some kind of desirable result here. We -- we kind of set
6 things based on the curves that are defined in -- in the
7 model report, ran the model and the comparative is really
8 the -- the water flow and flow levels predicted at Sioux
9 Lake, at the Water Survey of Canada gauged at Sioux Lake.

10 So I think calibration, no, it's a
11 validation model.

12 MR. ALEKSEY NAUMOV: Okay. Thank you.
13 You've partially addressed this one but on the
14 distinction between calibration and validation,
15 calibration usually the part that where you tweak the
16 model to represent a set of observe data. But validation
17 is when you perhaps use, ideally, an independent set of
18 data to see how -- to see whether the model that has not
19 been using these independent data can reproduce those.

20 And from reading the DAR it's not -- it's
21 not clear if it was validated in this sense; that is, if
22 -- if there's independent hydrological data set of
23 observed flows and levels, that the model after being
24 tweaked or calibrated has been run against to see how it
25 performs.

1 So the question is: Was there any -- were
2 there any data sets or data used for validation that were
3 not used to calibrate the model?

4 MR. TOM VERNON: No. We got basically
5 two (2) sets of data that -- from which the model is
6 primarily built. We've got a -- a water flow set forty-
7 five (45) years of -- of record or thereabouts at Sioux
8 Lake or a gauge has been moved since then - that's
9 certainly an -- an independent set of data. And we have
10 elevations, water surface elevations at Nonacho Lake over
11 the -- the same period.

12 That -- those data sets were used as the
13 primary building blocks to -- for inputs into the model I
14 guess in the sense that once we've done all that and we
15 run the model for a period where those measurements are -
16 - are available and compare that, the model outputs to
17 those -- those data, you know, that's -- that's all we've
18 got. We can't take the model. They don't have any other
19 comparatives to run it against and there's -- there's
20 just not enough information in the basin to do that.

21 And, you know, given that we built the
22 model from Nonacho Lake elevations, I would expect those
23 to be modelled pretty accurately when you come back and
24 reproduce them but I -- I think the -- the validation
25 against the -- particularly on lag times and -- and the

1 ability of the model to track the -- the timing of the
2 discharges at Sioux Lake, that's just something that
3 comes out of the -- of the model parameters. It's not
4 something that's fudged or -- or is -- is flukey, that's
5 just I think we were -- done a good job on that so.

6 I'd -- I'd say it's a relatively
7 independent validation.

8 MR. ALEKSEY NAUMOV: But do you have any
9 plans on -- in light of what -- I -- I thought I heard
10 mention that there were a few more gauges put in.

11 Do you have any plans to use that
12 additional data to -- to validate the model once the data
13 becomes available?

14 MR. TOM VERNON: It's a good point. I
15 mean, yes, obviously as -- if the project continues then
16 you're quite right, we're collecting data above Nonacho
17 Lake so that will help us. Right now flows into Nonacho
18 Lake are -- are an estimated data set. Putting the
19 gauging back there, as you know, it's going to take years
20 and years before you really have a credible data set to -
21 - to run against but it's all going to help and the --
22 the Tazin inflows as well are particularly important in
23 setting those releases and those targets from Nonacho
24 Lake.

25 So we anticipate that the model will be

1 alive. We've invested a lot in this -- this model. It's
2 software that's going to be continued to be supported I'm
3 sure by -- by the HEC people, I guess Harmie Corigus
4 (phonetic), and so, yeah, it's -- it's going to continue
5 to be developed and refined.

6 MR. CHUCK HUBERT: Thank you. Does
7 that explanation answer your question on data validation?

8 MR. ALEKSEY NAUMOV: Yeah, I think it's -
9 - thank you.

10 MR. CHUCK HUBERT: Please continue then.

11 MR. ALEKSEY NAUMOV: Okay. My next
12 question on the -- in DAR, generally the hydrology is
13 addressed both the baseline and the post-development with
14 respect to three (3) aspects: There's a magnitude of
15 flows and levels; there's frequency; and there's
16 treatment of timing.

17 But, two (2) additional aspects such as
18 the rate of change, that is the ramping rate, and the
19 duration of hydrology events such as particularly high,
20 particularly low flows do not seem to be addressed
21 outside of special circumstances such as planned and
22 unplanned outages.

23 So, do you have plans or would you be able
24 to incorporate these two (2) aspects of hydrologic regime
25 -- the ramping rate, rate of change, and durations into

1 treatment of water quantity?

2 MR. TOM VERNON: I think I only partially
3 understand what you want. I guess we had to make some
4 decisions about how to present data in a meaningful way
5 in -- in the DAR and in the appendix which is the -- the
6 model report. It could be presented in -- in different
7 formats.

8 Duration of events can be seen in time
9 series for any of the -- any of the scenario runs. If
10 there are specific ones that -- that people felt were
11 particularly important, we -- we can provide them, it's -
12 - it's simply a matter of -- of changing the presentation
13 of the data, I -- I think.

14 Is that true? I mean, ramping and changes
15 in levels or flows can be interpreted from the bar graphs
16 because they're all in months. So, obviously if you have
17 a big difference between one (1) month and the next,
18 there's -- there's a bigger change over that month on
19 average.

20 I think I'd be looking for some guidance
21 in exactly where that information would be most valuable
22 and in -- in what format, really, would convey what you'd
23 like.

24 I'm happy to -- to assist in that and
25 provide whatever you would like. But I'm -- I would need

1 clarification on exactly --

2 MR. ALEKSEY NAUMOV: Okay. Perhaps we
3 could discuss that as a side discussion.

4 MR. CHUCK HUBERT: Unfortunately the
5 experts to the Review Board should not be having face-to-
6 face sidebar discussion with the developer.

7 So, if you could phrase the question in
8 such a way as to get a -- a commitment or a deliverable
9 response, that would excellent.

10 MR. ALEKSEY NAUMOV: Then most
11 specifically about the ramping rates, there's coverage of
12 those for the planned and unplanned outages, but for the
13 -- the operational -- just operational aspect of it.

14 Say, at the -- for example, at the Tronka
15 Chua Gap flows will change. Flows generally will become
16 lower, but they will also ramp up and down more -- more
17 often because of the more, I guess, more aggressive
18 operation of the Nonacho Lake.

19 So, just a characterization of perhaps the
20 baseline ramping rates that exist now at Tronka Chua as
21 an example versus those that would be in effect for the
22 thirty six (36) and fifty six (56) megawatts scenarios,
23 might have some bearing on fisheries, aquatic resources.
24 This is, kind of, like a suggestion.

25 MR. CHUCK HUBERT: Can you provide an

1 answer to that in writing by the 30th of this month?

2 MR. TOM VERNON: So, the -- the request
3 is changes in flows ramping essentially for Tronka Chua?

4 MR. ALEKSEY NAUMOV: Yes.

5 MR. TOM VERNON: From baseline?

6 MR. ALEKSEY NAUMOV: From baseline, yes.
7 It's in the -- it's going -- it's more consistent on the
8 baseline scenario versus the both thirty-six (36) and
9 fifty-six (56) megawatt expansion because of more
10 fluctuation in the -- in the lake and in the ramp. So
11 the rate of flow through the Tronka Chua will change.

12 MR. TOM VERNON: Okay. Shane would like
13 --

14 MR. SHANE UREN: Okay. So just, in the
15 DAR we -- when we use the term "ramping," it was in
16 response to -- to an outage, all right, from the plant.

17 So, I think I understand what -- what
18 you're referring to at the Tronka Chua Gap. It's the
19 variations in flow, right? You're looking at the ranges
20 in flow and how --

21 MR. ALEKSEY NAUMOV: It's actually rate
22 of change.

23 MR. SHANE UREN: The rate of change in
24 those flows. So, that can be, like, on a daily basis, or
25 -- yeah, I see. Okay.

1 So, what we've presented in the DAR is --
2 yep -- what we've presented in the DAR is monthly
3 averages, and the ranges in those monthly averages for
4 the baseline, the thirty-six (36), and the fifty-six
5 (56).

6 And that's -- is that the right figure.
7 Yeah. And that's Figure 3.4-19.

8 MS. LINDA ZURKIRCHEN: It's in the
9 appendix.

10 MR. SHANE UREN: Oh, that's in the
11 appendix?

12 MS. LINDA ZURKIRCHEN: Appendix 93.

13 MR. SHANE UREN: Appendix 93 of the DAR.
14 So, that's the monthly averages. So, what you're looking
15 for is daily?

16 MR. ALEKSEY NAUMOV: Exactly, yes.

17 MR. SHANE UREN: Okay.

18 MR. CHUCK HUBERT: Okay. Is that a
19 commitment then to provide daily averages?

20 MR. TOM VERNON: Yeah. We -- we can do
21 that. I am puzzled a bit.

22 But, bear in mind Nonacho's a huge lake.
23 And Tronka Chua is only affected by it's -- it's as an
24 unregulated discharge point. Its -- its only control is
25 lake elevation. Lake elevation on a nine hundred (900)

1 square kilometre lake is -- is not particularly daily,
2 not even particularly weekly.

3 So, Tronka Chua is a slowly changing
4 environment. But, you know, on the basis that you're
5 talking daily, hmm, pretty slow.

6 MR. ALEKSEY NAUMOV: Well, that
7 explanation is actually sufficient so. I understand
8 that. Well --

9 MR. CHUCK HUBERT: Okay. If that answer
10 is sufficient then -- then you didn't -- you don't need
11 or require the daily averages then.

12 Please continue, Aleksey.

13 MR. ALEKSEY NAUMOV: Okay. Question on
14 releases from the Nonacho lake. In the DAR report
15 there's a table that shows monthly target releases from -
16 - from the lake under both scenarios. It's our
17 understanding that these releases are supposed to
18 compliment the inflows from unregulated portions of the
19 basin to the full generation flow, be it 180 or 240 cubic
20 metres per second.

21 Are -- are these -- were these largely
22 applied contin -- constantly across all thirteen (13)
23 years that simulation was done, these monthly target
24 releases?

25 Where I'm going with that is that if -- if

1 in the course of thirteen (13) years you have some dry
2 years, some wet years, would that not lead to certain
3 potentially under prediction of the variation in the --
4 in the level of the lake?

5 In -- in the wet year you would have --
6 say, in the dry year you would have less flow coming from
7 unregulated portion of the basin, from Tazin River. So
8 would you not have to release more from the Nonacho Lake
9 to compensate?

10 MR. TOM VERNON: Tom Vernon. Yeah.
11 Yeah. It's a good -- it's a good question and it's --
12 it's good -- it's a good thing you picked up on.

13 I mean, in -- in the modelling you have to
14 make some assumptions. In this case, those target
15 releases from the Nonacho were kept constant throughout
16 the thirteen (13) year period and they were -- they were
17 simply the -- the design flow of the plan minus the
18 predicted average monthly flows from -- from the Tazin.

19 That's definitely an oversimplification of
20 what you might try and do on a -- a realtime operating
21 basis because obviously the Tazin River is rarely going
22 to be running on its average. It's going to be all over
23 the place, so, from a -- a modelling perspective it's
24 probably simplistic. We have been looking at other
25 scenarios, as well.

1 And as data starts to become available for
2 the Tazin River, that's why that gauge is so important,
3 we'll develop a better understanding of variability
4 inflows in the Tazin River.

5 As to whether it leads to -- I -- I should
6 say, they're -- the -- the target releases are constant
7 subject to the constraints that Nonacho Lake can't be
8 taken down below its current water licence minimum and
9 subject to the minimum release requirements, which are in
10 the current water licence of 14 cubic metres per second.

11 So, yes, the -- the model will allow you
12 to -- to draw down to those constraints, but -- but then
13 it shuts down and only releases the -- the minimum flows.

14 As to whether it leads to -- I think you -
15 - you suggested it might lead to variations in -- in lake
16 levels, more extreme? Well, I -- I think the model stays
17 in -- in the -- in the time period that we have seen
18 within the historic ranges and within the -- the water
19 licence targets.

20 That would be the goal of -- of any
21 operational scenario, so, I -- I'm not sure I can answer
22 your question whether it leads to more extreme water
23 level variations. I'd have to think about that.

24 MR. ALEKSEY NAUMOV: Okay so.

25 MR. CHUCK HUBERT: Would you like --

1 yeah. Would -- do you need more time to think about that
2 and -- and provide a written response or...?

3 MR. TOM VERNON: Yeah. I -- we -- we can
4 provide a written response to that. Certainly, yes.

5
6 --- COMMITMENT NO. 18: Deze Energy to indicate
7 whether or not going
8 constantly across all
9 thirteen (13) years the
10 simulation was done (DAR
11 report), these monthly target
12 releases could lead to under-
13 prediction of the variation
14 in the level of the lake

15
16 MR. CHUCK HUBERT: Thank you. And
17 anything else?

18 MR. ALEKSEY NAUMOV: Yeah. I have a few
19 questions on erosion. Well, I think only one (1) applies
20 today. Yeah. The other one is for tomorrow.

21 MR. CHUCK HUBERT: Please hold the mic
22 close to your mouth, so that we can --

23 MR. ALEKSEY NAUMOV: Okay. Sorry. Yes.

24 MR. CHUCK HUBERT: -- pump up the volume
25 a bit.

1 MR. ALEKSEY NAUMOV: Yes. There's a
2 question on erosion at the Tronka Chua Gap. The thirty-
3 six (36) megawatt proposal, expansion proposal, will
4 cause more frequent peak flows from Nonacho Lake through
5 the Tronka Chua Gap. Depending on the shoreline and bed
6 conditions downstream of that gap, this may increase
7 erosion and sediment transport along this reach.

8 So what information is available on the
9 existing shoreline downstream of Tronka Chua Gap, and to
10 what extent, if any, has this area eroded since the
11 beginning of the baseline when flow began flowing over
12 the Tronka Chua Gap?

13 MR. TOM VERNON: Yeah, it's a good point,
14 increased flows in -- in Tronka Chua Gap at times.
15 Tronka Chua Gap is a rock -- a bedrock control as is the
16 entire channel into Tronka Chua Lake. And, Shane, how
17 long is that channel?

18 MR. SHANE UREN: Not long, it's probably
19 30 metres long, maybe.

20 MR. TOM VERNON: That's -- that's it, and
21 then you're into a lake, quite a big lake. Well, it's a
22 series of smaller ones but then the big one. My
23 recollection, Aleksey, is there's no sand, gravel or
24 erodible materials in that entire area. It's all shield
25 rock.

1 MR. CHUCK HUBERT: Is that sufficient for
2 you, Aleksey?

3 MR. ALEKSEY NAUMOV: Yes.

4 MR. CHUCK HUBERT: Okay, thanks for that.

5 MR. ALEKSEY NAUMOV: Okay. There's a few
6 questions on the potential effect of climate change, or
7 should they be -- is now a good time? Yeah? Okay.

8 MR. CHUCK HUBERT: Please continue.

9 MR. ALEKSEY NAUMOV: There's a question
10 on ice conditions and climate change. The impact of ice
11 conditions for the proposed development is discussed in
12 section 13.6. The emphasis of assessment was on changes
13 on water depth and velocities leading to changes in ice
14 conditions.

15 Was there a consideration towards how
16 climate trends and climate change, as identified in
17 section 16, might impact each development scenario
18 predicted ice conditions, for example, considering an
19 increase in precipitation and the absorbed increases in
20 annual temperatures?

21 MR. SHANE UREN: Shane Uren. We didn't
22 specifically look at climate change and how that may
23 change the -- the ice regime. But what we did look at is
24 the ranges of flow. So we've got considerations where
25 ice could be changed or altered from the project under

1 high flow scenarios, and under low flow scenarios, under
2 kind of the -- the up and down, the higher and lower end
3 of the range. And with that in mind, our effects
4 assessment was -- was undertaken.

5 So I guess, you know, we don't know how
6 climate change is going to change the ice. If we knew if
7 -- you know, we don't know if it's going to get warmer or
8 if it's going to get colder here or what that is, but
9 what we did is, we looked at, okay, if -- if it -- if --
10 if -- if it goes on this end of the spectrum so that we
11 have high flows potentially, and if we have low flows,
12 what does that mean to the ice and to the different
13 operating scenarios?

14 MR. ALEKSEY NAUMOV: Okay.

15 MR. CHUCK HUBERT: Is that answer good
16 for you or do you need a written response to that?

17 MR. ALEKSEY NAUMOV: No, that -- that's
18 okay.

19 MR. CHUCK HUBERT: That's acceptable?

20 MR. ALEKSEY NAUMOV: Okay. Now there's a
21 question on precipitation. The meteorological stations
22 used as data sources were located in Yellowknife and in
23 Hay River and in Fort Smith. It was noted that the
24 annual precipitation was weighted more strongly towards
25 the data from Fort Smith but it's not clear exactly how

1 they were weighted.

2 Do you know, what -- what was the -- how
3 was the statistical weighting and interpolation of the
4 precipitation from the three stations conducted? And why
5 was -- is there a station in Fort Resolution and why if -
6 - if so, why was that not used?

7 MR. SHANE UREN: Well, the -- Shane Uren.
8 For the hydro model, and I believe that's what you're
9 referring to by reference to section 9, 9.43 there, the -
10 - the model is based on flows and not driven by
11 precipitation. So how -- how -- how we incorporated the
12 precipitation or data and -- and weighted things into
13 estimates of precipitation specifically for the basin
14 didn't play a role in the development of the model. Is
15 that --

16 MR. ALEKSEY NAUMOV: No I -- I understand
17 that. But perhaps it will lead to my next question but
18 maybe I'll let you -- let you finish.

19 MR. SHANE UREN: Oh, I think I'm
20 finished.

21 MR. ALEKSEY NAUMOV: The -- the other
22 question is kind of related. It's about potential
23 intensity precipitation events and potential for them
24 occurring in the area. There is -- there's a note in
25 Section 16 about -- that lightning is common in the area

1 from June to August associated with frontal systems.

2 It's usually, but not always, where you
3 have lightning there's potential for intense
4 precipitation events associated with convectional cells.
5 These storms can be -- can be large but they're --
6 they're hard to catch with a limited network of stations.
7 So there are a few regional weather stations that may or
8 may not detect these high intensity precipitation, but
9 the lightning may be -- that would be registered by the
10 lightning detection system, monitored by Environment
11 Canada, might be able to help.

12 So was -- have you looked at the --
13 acquiring lightning data from Environment Canada to
14 assess the risk on potential for this high intensity
15 precipitation event? And have you, in general, looked at
16 the high intensity -- potential for high intensity
17 localized precipitation events, perhaps not as part of
18 the flow model, but as a -- as a large input into it?

19 MR. TOM VERNON: We have not looked at
20 what you suggested. As Shane alluded to, it's not a
21 precip -- precipitation driven model. Yes, there's
22 lightning storms associated with fairly intense local
23 cells, but the Taltson drainage system is 45,000 square
24 kilometres, and in looking at flow records where those
25 events would presumably show up, I mean, you just don't

1 see flood events associated with precipitation. It
2 really is a -- a freshet driven large scale area and
3 freshet driven flow regime with some storm events, rain
4 on snow events, in the fall season, as contributing small
5 increases.

6 But localized precipitation I don't think
7 needs to be accounted for. It's not seen in the -- in
8 the hydrological records as -- as significant.

9 So -- do you have another reason that we
10 would want to be looking at it?

11 MR. ALEKSEY NAUMOV: Well, as long you're
12 confident that it's -- it's not observed in hydrological
13 data and there's no evidence of high intensity events
14 actually playing a big role in the hydrograph.

15 MR. TOM VERNON: It certainly exists but
16 I think it's, you know, over a -- even a couple of
17 hundred square kilometres, a storm cell, it -- it --

18 MR. ALEKSEY NAUMOV: Mm-hm.

19 MR. TOM VERNON: -- there's so much
20 storage in the system and it's such a big system that it
21 doesn't really see it as significant.

22 MR. ALEKSEY NAUMOV: Thank you.

23 MR. DAN GRABKE: If I could just add, the
24 -- the control centre here for operations for the Snare
25 and Yellowknife and Taltson system, actually uses

1 Environment Canada's lightning detection system heavily.
2 We're a co-partner in that program. We help pay for some
3 of the costs. And they use it mostly for predicting
4 reliability and -- and seeing these storm fronts because
5 of lightning strikes, just to be prepared for them.

6 But -- so it is a tool we use but not for
7 predicting flows.

8 MR. ALEKSEY NAUMOV: Okay. Thank you.

9 MR. CHUCK HUBERT: And do you require
10 that explanation of rationale in writing, or is that
11 sufficient for your --

12 MR. ALEKSEY NAUMOV: That's -- that's
13 sufficient.

14 MR. CHUCK HUBERT: That's sufficient.
15 Thanks then.

16 MR. ALEKSEY NAUMOV: And that's all --
17 that's all I had.

18 MR. CHUCK HUBERT: Okay. Thank you very
19 much, Aleksey. Are there any further questions from the
20 Review Board experts at this time?

21 Okay, let's take a short break in that
22 case. Let's say fifteen (15) minutes, and we'll
23 reconvene after that. Thanks very much.

24

25 --- Upon recessing at 2:15 p.m.

1 --- Upon resuming at 2:30 p.m.

2

3 MR. CHUCK HUBERT: If we can please take
4 our seats now, we'll continue where we left off. Thanks.

5

6 (BRIEF PAUSE)

7

8 MR. CHUCK HUBERT: Okay. So we'll
9 continue with discussion on impacts to the Taltson
10 watershed. And just to note that with respect to Trudel
11 Creek, we'll consider those questions tomorrow, tomorrow
12 morning, so again, we'll just continue with impacts to
13 the watershed as a whole.

14 And would anybody like to ask a question
15 of the developer at this point? Please go ahead. A
16 microphone is on its way.

17 MR. GEORGE MARLOWE: To Deze Corporation
18 again, I'll ask you some questions. I've got about three
19 (3) but I -- one (1) -- I'm going to keep two (2) for
20 others.

21 You said about a water -- said about a
22 watershed -- the water in Nonacho Lake it freeze in the
23 fall time. I don't know if you've ever been there on the
24 lake in the fall time before Christmas and then on March,
25 I don't think you guys ever been there, okay.

1 And Nonacho Lake freeze in the fall time
2 right -- not like before, not that the '65 when they put
3 a dam. And the water freeze and it's level like this,
4 and when that drop water, it goes like this down. I
5 don't know how many feet. You're going to see the ice
6 like this at the edge on -- by the ground and it freeze
7 again down there now.

8 And then the water goes up again and it
9 don't come over again. It freeze again. It keep
10 breaking. So that means I want all of you -- we should
11 make a trip to find out before Christmas, maybe that's
12 the best time, too, and then one after Christmas on
13 March.

14 We'll take you. I'm a trapper. I'll --
15 I'll treat you. You're not going to starve or anything.
16 We got a good tent. We've got good stove. We're going
17 be a couple nights, two (2) nights, whatever, it doesn't
18 -- it doesn't matter. That's what we should do, then
19 you'll see what we're talking about.

20 MR. CHUCK HUBERT: Thanks for that
21 suggestion of a field trip. Is there any response to
22 the...

23 MR. GEORGE MARLOWE: Yes, the fish, I
24 don't know what they eat now, down there now, and after
25 the water goes up, what they eat again. What little

1 small, like a -- I was -- I seen that pap -- in the
2 paper, a frog or something, some kind of a different
3 stuff along the shore in the grass. What's happening
4 with that? Who knows? Nobody knows.

5 So I want you -- you should make a trip
6 anyway. Look at it with yourself, with your own eyes.
7 We'll take you. It's not far from Lutsel K'e so we could
8 drive there. I'm not talking about downstream.
9 Downstream, I don't know me. I've never been there, but
10 -- and something we should look at too, downstream,
11 because some trappers from Fort Res are saying they seen
12 some dead beaver or the house, lodge, up there without
13 water.

14 See, that means, what's happening there?
15 If we look at it, and you guys look at with yourself,
16 then you'll know it.

17 But at same time we make a trip before
18 Christmas, we'll put a net in the water for you to look
19 at the fish. You're gonna see the fish there. But
20 downstream, I don't know about that -- anything that fish
21 are -- but I go to Don Bossly's (phonetic) Lodge. A
22 couple times I went there for a meeting, and we had some
23 jackfish there, whitefish. It's okay for me. Good.

24 But you're gonna see the different if you
25 go to Nonacho Lake. And then we should make a trip in

1 maybe, July maybe, because there's a lodge, Nonacho Lake
2 lodge there. I know those people. I know those boys.
3 The father died a couple of years ago, but we heard about
4 it there -- there, hey. But those two (2) boys, I know
5 them real good. I went there this summer, one (1) trip,
6 but I -- I just flying around with the team, that's it.

7 So if we go there again, I know there's -
8 - there's a place I used to go with dog team, and
9 there's a place I go with the skidoo. I could show you,
10 and we'll set a net again and I'll -- I'll make you look
11 at the fish.

12 If you want me to fry that fish for you, I
13 will, but these people will eat first. But they will see
14 it anyway. I don't think anybody wants to eat it after
15 you see it yourself.

16 So something that -- but the next
17 question, and I want to talk to those people first and
18 then you guys. Thank you.

19 MR. CHUCK HUBERT: Thank you for
20 speaking. Any further questions on the Taltson watershed
21 issues? Please, Aleksey, then go ahead.

22 MR. ALEKSEY NAUMOV: Just one (1) more
23 question I overlooked accidentally. It's a question on
24 sediment control at construction site spoil piles.

25 The location of spoil piles have been

1 identified for the Twin Gorges and the Nonacho sites.
2 The piles are located near to water bodies and,
3 therefore, will have the potential to contribute sediment
4 to the water bodies as a result of precipitation and snow
5 melt, induced runoff.

6 It is proposed in the Erosion and Sediment
7 Control Plan that specific sediment control measures will
8 be implemented only on -- on an as needed basis.
9 Therefore, there are two (2) questions.

10 Since the location, the composition and
11 approximate size of the spoil piles is already known and
12 noted in the DAR, is it possible to define more specific
13 sediment control plans for the proposed spoil -- spoil
14 piles at Nonacho Lake and Twin Gorges?

15 MS. LINDA ZURKIRCHEN: Linda Zurkirchen.
16 Recognizing that, yes, they are fairly well defined in
17 the DAR, the stockpile sites.

18 That -- however, the actual sediment --
19 the sediment and erosion control mitigation measures that
20 are going to be designed and not applied afterwards, sort
21 of design such as sediment ponds, or tools that might be
22 used such as sediment ponds or catchment ditches or
23 anything like that, would be part of the detailed design
24 phase and aren't incorporated in the -- in the pre-
25 feasibility stage. So, they would be forthcoming in

1 facility will receive only occasional visits by operation
2 staff. How often and at what times of the year will
3 staff visit the -- the Nonacho site?

4 And will the -- will the staff be
5 responsible for monitoring of spoiled piles and
6 associated sediment control works?

7 MS. LINDA ZURKIRCHEN: I can answer part
8 of that question, the latter part, but I won't talk to
9 the operational visits on it.

10 But I -- I can identify that there -- the
11 biological monitoring component or environmental
12 monitoring component to the project is separate from the
13 operational component.

14 So if that site is identified in the
15 environmental monitoring program which we've been
16 speaking about this morning as a site that is included
17 for monitoring in the long term, it will be visited on
18 whatever basis is identified in the monitoring program to
19 be visited by somebody who's appropriately trained to be
20 conducting that assessment.

21 Coupled with that, if during operations
22 and operational people are qualified to make an
23 assessment of what we're looking at, they could do that.

24 So an example would be if we're looking at
25 the functionality of, say, a sediment control component,

1 an operational person may be well qualified to look at
2 that, the structural stability of it, whether it's
3 functioning or not.

4 If it's more of a biological component I
5 would envision that somebody more trained in the
6 biological aspect would be conducting that visit on the
7 environmental program.

8 And the frequency, I don't know. Maybe,
9 Tom, you can speak to the frequency of operational site
10 visits, or is that adequate?

11 MR. ALEKSEY NAUMOV: The question is not
12 so much on whether the operational staff will look at it,
13 but -- but on the monitoring aspect of it, how often and
14 when will these piles be monitored.

15 Are they part of the monitoring program as
16 you mentioned?

17 MS. LINDA ZURKIRCHEN: Being that we've
18 only developed the terms of reference for the monitoring
19 program, I wouldn't say that they're -- they're in or out
20 but certainly any -- if there is any long-term mitigation
21 component to the site, it would require monitoring.

22 And the answer is so there -- if there is
23 something long term in terms of mitigation at the site,
24 it would be monitored.

25 Frequency, I can't tell you what that

1 would be now but it would be developed with the
2 stakeholders to the satisfaction of everyone.

3 MR. ALEKSEY NAUMOV: Okay, thank you.

4 MR. ALAN EHRLICH: I'd like to go
5 backward and just take a step back. There are a couple
6 of different important questions that I heard from George
7 Marlowe's points here that I don't think we've really --
8 I -- I haven't heard Deze make any commitment to look
9 into.

10 Can you provide in writing, please, your
11 predicted impacts that result from changes and
12 fluctuations in ice level along the shoreline zone
13 downstream and how that will affect prey species that
14 fish depend on?

15 That was one of the questions that I
16 heard. That -- in writing that would be helpful. Can
17 you do that? I just --

18 MS. LINDA ZURKIRCHEN: Yes, we'd be happy
19 to do that.

20

21 --- COMMITMENT NO. 19: Deze Energy to provide in
22 writing their predicted
23 impacts that result from
24 changes and fluctuations in
25 ice level along the shoreline

1 zone downstream, and how that
2 will affect prey species that
3 fish depend on
4

5 MR. ALAN EHRLICH: Thank you. And also
6 in the Northwest Territories, we've heard of some
7 development projects that affect fish in ways that
8 communities notice changes their palatability as a -- as
9 a food source. So when I hear George Marlowe say if you
10 see the difference between fish upriver and downriver of
11 a hydro it can affect whether or not you want to eat the
12 fish, I think it could be helpful if Deze can provide in
13 writing your prediction on potential impacts to
14 palatability of fish upriver and downriver and what
15 criteria you think about when you make that prediction.
16 Will Deze do that?

17 MS. LINDA ZURKIRCHEN: Yeah, definitely we
18 can do that.

19 MR. ALAN EHRLICH: George, will that
20 satisfy some of the points you're getting at?

21 MR. GEORGE MARLOWE: Yes.

22 MR. ALAN EHRLICH: Thank you.
23

24 --- COMMITMENT NO. 20: Deze Energy to provide in
25 writing predictions on

1 potential impacts to
2 palatability of fish upriver
3 and downriver, and what
4 criteria is used when making
5 that prediction
6

7 MR. CHUCK HUBERT: Okay, thanks. Any
8 further questions, please. Now is the time to ask
9 questions of the developer on the Taltson watershed if
10 you have anything.

11 And if not, I'll pass it over to Tawanis
12 for some further instruction. Oh -- okay, please.

13 MR. RICHARD BROWN: Yeah, Richard Brown
14 speaking. I have a question that I guess it - it is
15 really to do with the South Valley Gorge and I think
16 Bruce may have sort of touched on it before, and that is:
17 What sort of measures would be required to increase the
18 amount of water that can flow through the South Valley
19 Gorge if that was desirable for the overall project?
20

21 (BRIEF PAUSE)
22

23 MR. TOM VERNON: So your -- your
24 question, just to clarify, is: What type of measures
25 would be required in the South Valley Gorge, which is

1 currently dammed but is where the bypass spillway would -
2 - is proposed to discharge?

3 MR. RICHARD BROWN: Right, I believe
4 there's a fairly minor amount of water that would be
5 allowed to go through there whereas most of it would go
6 down the Trudel Creek location if there was a shutdown in
7 the new power plant.

8 MR. TOM VERNON: Correct.

9 MR. RICHARD BROWN: So I think when we
10 were here last we sort of touched on, well, since this
11 alignment was probably where a large percentage of water
12 previously went and -- and flowed before the existing dam
13 was constructed, what -- I guess in essence why is it not
14 being considered for more flow at this point in time and
15 what would be needed to -- to make that a viable option?

16 MR. TOM VERNON: Well, I think our -- our
17 goal in putting forth the bypass spillway was to maintain
18 the minimum flows on certain shutdown scenarios and we've
19 assessed the impacts based on that layout. And I think
20 our conclusions are that that is a viable arrangement.

21 I -- I suppose technically it's -- it's
22 possible to enlarge things. It would be -- it would come
23 -- would obviously change things from our perspective.
24 But the bypass spillway as proposed is -- is what we
25 assessed at about 30 cubic metres per second and,

1 obviously, the South Gorge probably passed more than that
2 in its -- in its capacity as -- as part of the system but
3 I don't know what -- what level it would...

4 MR. RICHARD BROWN: So it's technically
5 possible to put more water through there and -- and less
6 through the Trudel Creek channel if that was desirable?

7 MR. TOM VERNON: Yes, I think it could be
8 technically possible, yeah.

9 MR. RICHARD BROWN: Thank you.

10 MR. CHUCK HUBERT: And that answers your
11 question sufficiently?

12 MR. RICHARD BROWN: Yeah, I think so.

13 MR. CHUCK HUBERT: Okay, thanks, anything
14 further?

15 MR. RICHARD BROWN: No, not right now.

16 MR. CHUCK HUBERT: Thank you. Okay, once
17 again, please go ahead. We'll get a microphone to you.

18

19 (BRIEF PAUSE)

20

21 MR. GEORGE MARLOWE: This, you have only
22 one (1) generator in the Taltson River right now. But
23 remember, I told you about that lake goes up and down
24 like that. If you put two (2) in there to make it more
25 kilowatts for the mine, town, how much water do you have

1 to -- to have that in Nonacho Lake? Do you have to flood
2 again? Then more damage again? Is that -- that's how it
3 going be or what?

4 MS. LINDA ZURKIRCHEN: No, there -- there
5 is no additional flooding in Nonacho Lake under this
6 design. And that was one (1) of the criteria that Deze
7 brought to the table, to the design team in the -- in the
8 initiation of this project that there's going to be no
9 new flooding in the system.

10 So what the design does is, does a
11 different regulation of the flows that is being
12 discharged from the facility in that they -- what's --
13 the -- the flows that are currently coming out will be
14 controlled to a different scenario and in greater
15 detail, in that right now the control structure is such
16 that the -- the -- the Power Corp. has to bring people
17 out to Nonacho -- you're probably more familiar with the
18 site than I am -- and physically -- physically, manually
19 change the flow that's coming out.

20 And the design of this project is that it
21 can be regulated from the central operations facility and
22 have more control over the water that's going to be
23 released and finer tuned so that there's no new flooding
24 but there's more control on the water that's being
25 released.

1 MR. CHUCK HUBERT: Does that answer your
2 question?

3 MR. GEORGE MARLOWE: I guess so. Well,
4 they said no flooding and the water will stay the same as
5 now, right now the way it is now.

6 MS. LINDA ZURKIRCHEN: The -- the water
7 level won't go any higher. The change in water level in
8 Nonacho will be slightly different over the seasons than
9 it is now. And do you know off -- I'm just -- I'm just
10 going want -- wondering, Tom, do you know off the top of
11 your head how it's going to be different or -- or Shane,
12 and just --

13 MR. SHANE UREN: Yes?

14 MS. LINDA ZURKIRCHEN: -- without
15 reviewing it, you're probably more familiar right now
16 than I am.

17 MR. SHANE UREN: Yeah, so just -- this is
18 Shane Uren. So just to expand upon what -- what Linda
19 was saying is that within the historic range of flows, so
20 the -- the highest flow we saw historically and the
21 lowest flow we've seen historically, under operations the
22 -- the flows won't go higher or lower than those levels
23 or the -- the water levels won't go higher or lower.

24 However, what will be different is that
25 the -- the lake will be managed for power generation and

1 I can just add to this a little bit. One (1) thing
2 George is -- we'll draw a picture maybe during the break
3 or whatever that shows it. I know it's -- it's a little
4 hard to understand, I'm just understanding it, too, but
5 there's a lot of water right now that goes around the
6 plant, and all we're doing is going to have that water go
7 through another plant.

8 So we don't really require a great deal
9 more water. It's just right now it's not doing anything.
10 It's going around the plant, we're putting another plant
11 in, that water will go through that plant and make, well,
12 three (3) times more power.

13 But, like I say, to -- in order to have
14 that power generation fairly constant throughout the
15 year, we'll -- we'll keep the Nonacho Lake, hold back the
16 water a little bit more in the spring and summer, so
17 there's more water to go out in the wintertime.

18 But if -- if you want at -- at the break,
19 we can draw -- I can draw a picture that tries to explain
20 that. Yeah, so there won't be sudden drops as much
21 'cause it will be more gradual, gradual control with
22 these gates. Right now these gates have to go all the
23 way open or all the way shut. The new gates will be able
24 to move very slowly and so there will be less abrupt
25 changes, less fast changes.

1 MR. CHUCK HUBERT: Further question?

2 MR. GEORGE MARLOWE: Another thing to
3 that, like, when I see the water drop in the wintertime
4 and the ice breaks like this sharp, if you go there with
5 a skidoo, you're not going to go up on the trail where
6 you used to go up on the trail. You're not -- you will
7 not now.

8 You have to find a place to go around
9 'cause it -- you -- you know, you know how to drive
10 skidoo? You cannot -- you're going to hit that thing
11 there and you're going to break your skis. So you got to
12 watch where you're going. And we -- I'm not going to
13 tell you everything about that lake before we make a trip
14 and every -- every move I want you to go ahead. You'll
15 see what I mean there. I'm not going to tell you
16 everything right now.

17 MR. CHUCK HUBERT: Thank you. Any other
18 questions regarding impacts to the Talston watershed,
19 please speak now.

20 Okay. Thanks very much, and I'll turn it
21 briefly over to Tawanis here. Thanks.

22 MS. TAWANIS TESTART: First of all, we're
23 -- we're nearing three o'clock, which is our scheduled
24 break, but as there seem to be no more questions
25 pertaining to the key line of inquiry number 1, we were

1 thinking that perhaps we'd adjourn for the day.

2 We do have this room for the rest of
3 today, so if people here wanted to have a meeting with
4 Deze and have one of those sidebar conversations, the
5 room is available and that is possible.

6 And if no one else has any other
7 questions, we thought maybe everyone would like to go
8 back to work and then reconvene here tomorrow to discuss
9 key line of inquiry number 2, which is the Trudel Creek.

10 And apparently there's some people from
11 Lutsel K'e who would like to talk to DFO when they're
12 available.

13 Oh, and also, if you haven't signed in on
14 our sign-in sheet could you please do so, so that we can
15 have an idea of everybody who attended today. So with
16 that, I think that's the last thing I needed to say.
17 Thanks to everyone for participating. I guess Dan wants
18 to say something.

19 MR. DAN GRABKE: Oh, just a question.
20 Can we leave any stuff here or do we have to take it out
21 and bring it back in the morning?

22 MS. TAWANIS TESTART: No. We have keys
23 for this room, and we will lock it up, so you can leave
24 your things here.

25 So thanks to everyone for coming and

1 participating and for all the good questions, and thank
2 you for the productive day.

3

4 --- Upon adjourning at 2:55 p.m.

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8 Certified correct,

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14 _____
Wendy Warnock, Ms.

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