of metals. So, yeah, it does need to be defined clearly.

GREG MISSAL: I think finally, Mr. Chair, I would just like to make reference to, I think it is Table 4.2 in the Environment Canada submission, and just to point out and emphasize that we obviously don't believe that all of these requirements should be -- all of these discharge limits should be regulated limits, if you will recall my slide, I guess it was just this morning, there were six of the items that we believe should only be monitored, and we would certainly still maintain that position.

And then I would also like to add that any further position that we have on the Environment Canada items will be discussed in our closing comments as well. Thank you.

ANNE WILSON: Anne Wilson, Environment Canada. I would just like to note on the discharge limits that in Table 4.2, technical memorandum 0, proposed discharge limits. It does state that those were all proposed discharge limits, and that was where I had come from on that. Unfortunately not having been here last night for Kelly's presentation, I wasn't aware that some of them were to be thresholds. But nonetheless,

Environment Canada does believe that the ones, nitrate and arsenic should be regulated as opposed to thresholds.

CHAIRMAN: Any further questions? Any questions from the floor to be addressed to Environment Canada?

DILLON CONSULTING QUESTIONS ENVIRONMENT CANADA:

Q BRIAN LEECE: Brian Leece, Dillon Consulting. I'm wondering, Mr. Chairman, if Environment Canada could provide a rationale for why they think it necessary to average hex chrome and chrome 3. If I understand it correctly, hex chrome is very seldom found in environmental samples, most of it is converted to chromium 3. So I am curious as to why they are concerned about averaging hex chrome and chrome 3 for a discharge limit for chromium?

A ANNE WILSON: Anne Wilson, Environment Canada. That is the approach that has currently been taken in the evaluation of the Ekati license limits, and I think the big reason behind that is that we don't have specific data on that site's composition of the species of chromium. So it is trying to walk a middle road without saying we are going to take the worst-case scenario and assume it is all hexavalent.

Q BRIAN LEECE: Just an additional clarification. Not being familiar with the Ekati, Mr. Chairman, is there any evidence at Ekati that hex chrome is actually present?

A ANNE WILSON: Anne Wilson, Environment Canada. We are only getting numbers for total chromium, they aren't distinguishing the species.

CHAIRMAN: Are there any questions from DIAND?

GLEN STEPHENS: No.

CHAIRMAN: Any questions from DFO?

DERRIK MOGGY: No questions, Mr. Chairman.

CHAIRMAN: Any questions from NTI? Any questions from KIA?

JOHN DONIHEE: No, sir.

CHAIRMAN: Any questions from independent consultants?

RAMLI HALIM: No more questions, Mr. Chair.

CHAIRMAN: Any questions from the Hamlet of Kugluktuk? Thank you.

CHAIRMAN: Thank you very much, Anne Wilson.

WATER BOARD STAFF QUESTIONS ENVIRONMENT CANADA:

Q DIONNE FILIATRAULT: Thank you, Mr. Chairman. Anne, based on the presentation that you gave, has Environment Canada verified the monitoring recommendations specific to ammonia against the proposed monitoring that Tahera provided? Can you be a little more specific with respect to location, frequency, parameters and the phase of the project where you feel that there potentially needs to be -- it needs to be monitored?

A ANNE WILSON: Anne Wilson, Environment Canada. The timing for ammonia would, of course, be postproduction, as soon as the PKCA is receiving the kimberlite. What is proposed in the most recent draft, which I have just scanned over supper, appears to be adequate in that it is looking at monthly sampling, if I recollect that correctly.

And the reason for bringing up the point in the presentation is while we have draft programs in front of us for both the AEMP and the SNP, we haven't got a final SNP or AEMP that we know it is going to be in. So we are making a point, even though the proponent has substantially covered that in the proposed frequency and locations of their

monitoring.

Q DIONNE FILIATRAULT: So, Mr. Chairman, so this point you are agreeing with the proposal of monthly monitoring?

A ANNE WILSON: Anne Wilson, for ammonia, I'm sorry, yes. Because our concern is largely going to be with the concentrations in the PKCA. The downstream concentrations will be picked up in the AEMP.

Q DIONNE FILIATRAULT: Mr. Chairman, in the presentation under Recommended Criteria, you had some discussion with Tahera, and I'm not sure I kind of caught it all. But based on what you submitted, dissolved aluminum is of concern at freshet. Is it expected to be a concern after that freshet for the next three months of discharge? And, I guess, would it be appropriate to set two levels or recommended criteria, one that would be imposed at freshet and one that would be imposed for the other three months of the period of discharge? That's one concept.

And the other is, the proposed limits that are submitted by Tahera, ultimately do they protect freshwater aquatic life, which I think is the bottom line of what Environment Canada is trying to achieve?

A ANNE WILSON: Anne Wilson. To start with the question about freshet and thinking of different limits, the period at which we don't feel those limits, the proposed limits would be protective would be at freshet when we have the lowest dilution. There is going to be that brief period of time where it is only ten to one, the concentrations under, I think, two of the scenarios could be into levels that are not protective.

With respect to the rest of the limits, other than the chromium and the nitrite, we feel that Tahera has done an excellent job of developing criteria and water quality objectives.

Q DIONNE FILIATRAULT: Mr. Chairman, in the submission, you also make reference, and I am looking for some clarification with respect to the faecal coliform limit of a hundred that you have proposed. From the perspective that you had indicated that if you are planning to recycle water through the processing plant, that the faecal coliform limit from -- basically you can't have any faecal coliform limits in the PKCA.

So are we -- are you saying that the option is is that if we want -- on balance, there is two options here, one is we discharge from the waste water treatment plant to the PKCA at a certain

effluent level that the proponent has proposed, but then they would not be able to recycle, because there is known faecal coliforms in the effluent water from the PKCA?

A ANNE WILSON: Anne Wilson. The sewage treatment package, which was detailed in the recent submissions, does propose to have ozonization and disinfection. I believe it would be disinfection; it had two options listed there, and should not have any -- it should have full disinfection. There shouldn't be any faecal coliforms when it is going into the PKCA. So there shouldn't be any reason not to recycle, but it should be tested annually. And if they are going to recycle, then there shouldn't be a hundred limit, there should be no faecal coliforms for human health concerns, of course.

VICE-CHAIRMAN: Just for clarification, the interpreters are having a problem with the acronyms that you are constantly using. There is no Inuktitut for acronyms, so if you can perhaps tell them what it is. Like SNP and AEMPs, and so forth. They just dropped us a note, and they don't know what it is.

DIONNE FILIATRAULT: Mr. Chairman, for the clarification of what some of the acronyms are,

AEMP refers to the aquatic effects monitoring program which is the sampling program proposed by the proponent to assess aquatic effects.

The TSS is total suspended solids. TDS is total dissolved solids. SNP is a standard industry -- I guess in the NWT, they use that as part of their monitoring stations, as opposed to, I guess, practice for the Board is to use the -- like for the Jericho Type B license, it is JER1. All their stations are all SNP numbers.

CHAIRMAN: Further questions?

DAN JOHNSON: Just a clarification, Mr. Chairman. In any reclaim system, we would always get our potable water from Carat Lake, that system would always stay. So we never flipped our sewage into a lake and then draw our potable water out of the same reclaim basin. We will always draw all our potable water out of Carat Lake, even if we do reclaim some water out of the PKCA.

So I think in the context of setting zero faecal coliform limits in the return water is not a requirement because we wouldn't put that into our water purification plant to begin with.

CHAIRMAN: Any further questions for Environment Canada?

Q DIONNE FILIATRAULT: I guess I would just

ask, frame that in the form of a question to Environment Canada. Is that your understanding as well, and is that agreeable to what limits you are proposing or suggesting?

A ANNE WILSON: Anne Wilson. No, of course the potable water is coming from a different source, and it is more of an industrial human health risk that was imposed at the Ekati mine, because they do put their treated sewage now into their tailings containment facility, and there has been the concern for their recycled water for worker health in the mill. And certainly there is no potable water connection there.

CHAIRMAN: Any further questions from the staff?

DIONNE FILIATRAULT: I believe Steve has some questions, Mr. Chairman.

Q STEPHEN LINES: Stephen Line, Nunavut Water Board. I just have one question, Mr. Chairman, and it is regarding the use of Ceriodaphnia dubia for the chronic toxicity testing. I might have misheard it during the last intervention, but I believe I heard that it takes 21 days to show chronic toxicity test results from using this species. And I understand that this test is to be done before any discharge is released

from the PKCA. So I'm wondering if there is any other species that can be used that could provide faster test results?

And during Environment Canada's intervention, it was spoken a lot about the Ekati experience, and I am wondering if that's the species that's used at Ekati, and if there is any major problem at that mine with regard to chronic toxicity testing?

A ANNE WILSON: Anne Wilson, Environment Canada. Just to clarify, the chronic test should be done with samples from the receiving environment at the end of the discharge, not before discharge. I think the previous intervenors had recommended doing that on an investigative basis with undiluted effluent as a lab test, not as a field monitoring tool.

And just with reference to the Ekati site, there will be chronic toxicity testing in their renewal license. There was not that requirement in their first license, which was the first diamond licence in the territories, and it has only had acute toxicity testing in it.

Q DIONNE FILIATRAULT: Thank you, Mr. Chairman. I did have two more. One was with respect to the submission that Tahera had made, and in your review, and you did mention flocculent

addition options, there was a statement in the documentation in a letter to Bruce Ott, and I refer to Appendix E, and it said that Environment Canada wanted to receive some information prior to the water licensing phase. And I just want to confirm with Environment Canada that any issues that were raised in that letter have been addressed to their full satisfaction?

A ANNE WILSON: Anne Wilson. Can you just give me the date of the letter and who it was -- we have had a number of pieces of correspondence. Most of the recent correspondence has been to do with which baseline data were being collected and when they would be available.

Q DIONNE FILIATRAULT: Yes, Mr. Chairman. It is 28th of May 2004, to attention Greg Missal Flocculent Addition, from Bruce Ott. One page.

A ANNE WILSON: That issue has been sort of lesser concern now. We have had some further studies done and learned that the toxicity of flocculents is very minimal. It is the coagulants that tend to cause problems, and they have a chronic toxicity effect on the cladocerans.

Recent work on young trout have shown that the levels at which we would see acute or chronic toxicity are well above anything that you would see

in any of the mine supernatant when they were adding coagulants and flocculents. And if you would like that report, I can certainly put it on the record.

Q DIONNE FILIATRAULT: Mr. Chairman, just a point of clarification. It probably would be useful for the Board to have that information filed.

Second, the final slide that you had shown, and there was a little bit of discussion at the end of how do we define this and how do we define that. I'm wondering if Environment Canada could provide some proposed definitions for the list that they provided, preferably early tomorrow so that then Tahera and the other parties could have an opportunity to review those and provide clarification on potential definitions that might be put into a water license?

A ANNE WILSON: That would be fine. Can I just narrow down which ones we would like as to being the definitions discussed for ARD and for seepage, and was that it?

Q DIONNE FILIATRAULT: Mr. Chairman, actually I would propose that they all be defined, if possible.

A ANNE WILSON: Anne Wilson. I will

try and get that to you by the end of tonight, and if not, it will be tomorrow morning.

Q DAVE HOHNSTEIN: Thank you, Mr. Chairman, Dave Hohnstein. I just had a couple of clarification questions for some terminology that was used in the submission.

Would you be able to provide us with a definition of what carefully monitored is referring to? I believe it was under ammonium monitoring. I think we got clarification on some of the sewage parameters, but there was one -- the ammonia one that we are still wondering about.

And also under water chemistry there was reference to monitoring of water chemistry should be done often enough to identify seasonal long-term changes. And I was wondering if you could provide us with what an idea of what enough might refer to, whether it is weekly, monthly, that sort of thing? Thank you.

A ANNE WILSON: Anne Wilson. With respect to the ammonia, I think that monitoring carefully is going to entail monitoring on the frequency that is prescribed under the license, ensuring that we know at the same time the temperature and pH of the water so we can determine the toxicity of the ammonia form. And the most

important part will be taking the action, if we do see high levels developing over time, to inform the Water Board, inform any of the stakeholders, and get started on contingency planning. So it is doing the routine monitoring and just being mindful with the results.

And as far as -- can you just give me a context for the other question as to a parameter and a site?

Q DAVE HOHNSTEIN: Sorry, Mr. Chairman. I made this note out of the submission, and I'm not too sure, I would have to go back to review it out of the submission. But it is simply referred to as monitoring of water chemistry being done often enough to identify seasonal long-term changes.

So I guess just trying to get an idea of what the frequency might be that Environment Canada would recommend.

A ANNE WILSON: Anne Wilson. That's where it would be very helpful for us to have an AEMP in front of us to review, and we can comment on a site-by-site parameter-by-parameter basis. And it is a little difficult just the -- as far as the SNP goes, the frequencies that I saw in the revised document appeared to be acceptable, certainly the scope of the parameters was

acceptable. But we haven't seen the full details on an AEMP yet. I'm sorry, the aquatic effects monitoring program. And rather than SNP, I should be saying a surveillance network program, sorry to the translators for that.

Q DAVE HOHNSTEIN: Mr. Chairman, just going back to the submission, it was in reference to changes in major ion, nutrient and metal concentrations. So it looks like it is, you know, the sampling regime and, you know, trying to understand how often we might be requesting sampling. And, again, you did mention the AEMP, and I guess we should have preference to that too.

A ANNE WILSON: Anne Wilson, Environment Canada. I think that this is where we would like to see the adaptive management come in on the part of the company. If we are seeing a lot of null results in the monitoring, then we wouldn't worry so much about stepping up the intensity or the frequency of the monitoring. If we were seeing changes that can't be explained or that weren't predicted, then we would want to see more frequent monitoring and investigation of it. So it is very difficult to make blanket statements.

CHAIRMAN: Do we have any further questions from the staff?

DIONNE FILIATRAULT: No, Mr. Chairman, I think we are done.

CHAIRMAN: Thank you. Thank you, Anne. Let's take a ten-minute break.

(BRIEF ADJOURNMENT)

CHAIRMAN: Welcome back. Environment Canada, Anne Wilson, there is one quick question just for clarification apparently, Anne.

Q DIONNE FILIATRAULT: Just to clarify for the parties and people that -- over the break, Tahera and Environment Canada actually resolved an issue on one of the discharge parameters. And I believe that it is beneficial, even though Anne was dismissed, to bring her back to the table. It just makes the Board's job that much easier.

So if everybody is okay with that?

A ANNE WILSON: Anne Wilson, Environment Canada. I would just like to note that the proponent has made a very good suggestion with resolving the concern with seasonally high levels of aluminum in the receiving environment, and that we could have a regulatory limit which covered the dissolved form, as well as the total form, and that would address our concerns with the protection of aquatic life.

BILL TILLEMAN: Thank you,

Mr. Chairman. Also there is a report that Environment Canada was going to file, and so whatever one what was, if they could get it to the Board before the end of the hearing. So if she could tend to that, then I would appreciate that. And Dionne has one more thing while I get prepared to swear in Mr. Moggy

(EXHIBIT TO BE MARKED WHEN RECEIVED)

DIONNE FILIATRAULT: It is probably just the terminology that I used. I just want to make clear that actually it is resolved only between Tahera and Environment Canada at this point. It is still subject to discussion by the parties, if they so wish, in their submissions and evidence. It is an option.

CHAIRMAN: Thank you.

LICENSEE CONTINUES QUESTIONING ENVIRONMENT CANADA:

Q KELLY SEXSMITH: Mr. Chair, with your permission I would like to ask one more question. Anne, could you just clarify for the record what the concentrations that we discussed would be for those two parameters?

A ANNE WILSON: Anne Wilson, Environment Canada. I will have to bring that to the table tomorrow as I don't have in my head the correct numbers for dissolved aluminum that would

be protective. So if I can defer that and bring that to my closing comments or otherwise tomorrow.

CHAIRMAN: Okay. Next presentation is done by DFO.

BILL TILLEMAN: Thank you, Mr. Chairman. And so as Fisheries and Oceans is getting ready to present, we will mark the next two exhibits as the electronic copy which the Water Board staff now have, and also a hard copy. And so whatever numbers those are, Ms. Filiatrault is already filling them in, 10 and 11. Thank you, Mr. Vice-chair. Let's swear in Mr. Moggy and go from there.

EXHIBIT NO. 10:

ELECTRONIC COPY OF DEPARTMENT OF FISHERIES AND OCEANS' PRESENTATION

EXHIBIT NO. 11:

HARD COPY OF DEPARTMENT OF FISHERIES AND OCEANS' PRESENTATION

BILL TILLEMAN: Please state your name for the record, and spell your last name.

DERRIK MOGGY: Derrik Moggy, M-O-G-G-Y.

(DERRIK MOGGY SWORN)

BILL TILLEMAN: Thank you.

PRESENTATION BY DEPARTMENT OF FISHERIES AND OCEANS:

DERRIK MOGGY: Thank you, Mr. Chair. My name is Derrik Moggy. I'm a habitat biologist with Fisheries and Oceans Canada in Iqaluit.

Fisheries and Oceans Canada is pleased to have the opportunity to participate in the Nunavut Water Board process and provide the Board with our comments and recommendations for the Jericho diamond project.

Before I start, I would like to provide a brief outline of our presentation. At first, I would like to take a moment to go over the role of Fisheries and Oceans Canada and the regulatory process for the Jericho diamond project.

Although we have provided detailed intervention comments that were submitted to the Water Board on November 30th, I would like to present a summary of the outstanding concerns from Fisheries and Oceans. I would also like to present the means to which Tahera and DFO have resolved these issues, or the recommendations that Fisheries and Oceans will be presenting to the Water Board, as a result.

In addition, I would like to present an overview of the status of our no net loss plan. And, finally, I would like to follow up with Fisheries and Oceans' concluding statements.

The mandate of Fisheries and Oceans Canada is to conserve fish habitat, fish and fish habitat, to ensure sustainable fisheries for Canadians. The Fisheries Act provides the legal basis for this responsibility and its federal legislation established to manage and protect Canada's fisheries resources. It contains specific sections designed to protect fish and fish habitat referred to as the habitat protection provisions of the Fisheries Act.

Subsection 35(1) of the Fisheries Act states that no person shall carry out any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat, commonly referred as HADD. Where it cannot be avoided or mitigated, the minister of Fisheries and Oceans Canada may authorize the HADD of fish habitat pursuant to Subsection 35(2). This provides the means and conditions for allowing development projects to proceed.

In accordance with Fisheries and Oceans' policy for the management of fish habitat and its guiding principle of no net loss of productive fish habitat, authorizations are generally issued on the condition that acceptable measures to compensate for any unavoidable habitat losses are developed

and implemented by the proponent.

When we refer to compensation, we mean the creation or improvement of fish habitat to balance off any losses.

In addition to the policy, the habitat conservation and protection guidelines outline the standard approach to habitat conservation and protection through the application of the no net loss principle. The guidelines outlined the hierarchy of preferences to achieve no net loss, and includes the use of redesign, relocate and mitigation to protect fish habitat. Habitat compensation is considered only after all other options have been discounted with adequate rationale.

Some of the other relevant sections of the Fisheries Act include the provision of safe fish passage, the authority to ensure water intakes are designed to prevent entrainment and impingement and the prevention of the destruction of fish by means other than fishing. And just to clarify, entrainment occurs when a fish is drawn into a water intake and cannot escape, while impingement occurs when entrapped fish is held in contact with the intake screen and is unable to free itself.

The use of explosives in and around fish