habitat may result in the destruction of fish, as can the dewatering of fish habitat.

Subsection 36(3) prohibits the deposit of deleterious substances into the waters frequented by fish. Sediment is considered deleterious substance under the Fisheries Act; therefore, sediment released as a result of construction activities must be controlled to ensure compliance with Subsection 36(3).

Although Fisheries and Oceans is legally responsible for the administration and enforcement of all sections of the Fisheries Act, Environment Canada administers and enforces the pollution prevention provisions, which include Subsection 36(3).

Through the course of the Water Board application, Fisheries and Oceans has had the opportunity to identify many of our concerns, either directly to the proponent or through the technical sessions that have been facilitated by the Water Board. As a result of these interactions, Fisheries and Oceans has been able to conclude that the majority of our concerns have been addressed. We do have several outstanding concerns that we would like to bring to the attention of the Board for consideration in the

final hearings.

With respect to the water intake design, Fisheries and Oceans had two main concerns. These include the design of the water intake, which is not consistent with the Fisheries and Oceans freshwater intake end of pipe fish screen guidelines. Secondly, the orientation of the causeway had the potential to further impact adjacent fish habitat.

Through discussions with Tahera, the issue of the water intake was resolved by extending the water intake pipe into sufficiently deep water and designing a fish screen to prevent entrainment and impingement.

With respect to the potential impact on adjacent habitat, Tahera was confident there would be not effect. Therefore, the need to redesign the water intake causeway to a buried pipe in the lake bottom or incorporate flow-through culverts in the causeway was considered to outweigh the potential benefits. However, Tahera did agree to monitor the adjacent fish habitat and implement contingency mitigation measures, if required.

Two main items were identified for Stream C1. The first item related to the channel design and construction of the diversion channel, while a

second item related to the water flows during operation and at closure.

With respect to the channel design and construction, the uncertainty associated with water quality at closure led Fisheries and Oceans to support the development of a diversion channel for long-term use.

Fisheries and Oceans also identified the need to design the dissipation pools to provide additional benefits to fish habitat through redesign to more narrow and longer pools. Furthermore, based on our 2004 site visit, the loss of vegetation from the upper sections of Stream C1 is expected to be a key item missing from the existing channel.

Furthermore, the lack of baseline data collected prior to the construction of the berm led to uncertainty with respect to the extent of fish passage in Stream C1. Fisheries and Oceans also had concerns that the mitigation measures may not adequately address permafrost concerns, particularly during early operation.

VICE-CHAIR: Derrik, when the court reporter has a hard time keeping up, we have a hard time. You definitely have to slow down in your speaking. It is very difficult to get it all in

translation. Please slow down.

DERRIK MOGGY: Tahera did agree to create longer narrow dissipation pools and investigate the feasibility of incorporating repairing vegetation, which will be submitted in revised diversion channel drawings.

As well, Tahera agreed to monitor stream characteristics and fish use at the mouth of Stream C1 to determine the need to enhance fish passage further upstream. Fisheries and Oceans also recommends that the frequency of monitoring be increased to increase the early operation of the diversion channel -- to ensure that the early operation of the diverse channel does not lead to erosion concerns due to permafrost.

In addition, Fisheries and Oceans recommends that the dissipation pools be used in conjunction with temporary copper dams to control sediment, particularly during the early initial operation of the diversion channel.

Water flows in Stream C1 will be impacted due to the conversion of the watershed to an open pit and waste rock and ore piles. Given the concerns with water quality in the runoff water, treatment at the processed kimberlite containment area may be required. Therefore, the loss of flows may alter

fish utilization in the mouth of Stream C1. Tahera predicted the loss of flows will not be significantly different than the loss of flows due to the constructed berm. And, therefore, fish utilization will not change.

While Fisheries and Oceans supports the centralized treatment of water, we would encourage the maintenance of flows in Stream 1 be optimized. As a result, Tahera will monitor fish utilization in the lower section of Stream C1 to verify their predictions.

At closure, Tahera has indicated that the diversion channel will be abandoned if water quality is adequate for discharge to Stream C1. However, in putting the end pit lake on line with Stream C1, further losses to the flow may result due to evaporation. Furthermore, the deep end pit lake may result in the loss of nutrients for fish to downstream sections of Stream C1.

Tahera also stated that a connection will be created between the end pit lake and Stream C1, which will be sufficient for fish passage.

Fisheries and Oceans recommends that the option to reinstate the flows in Stream C1 be reconsidered during operation and resolved prior to closure, as water quality concerns are better

understood. In the interim, Tahera has committed to maintain the diversion channel as a permanent structure, should water quality identify its need.

With respect to water quality, discharging from the PKCA, the processed kimberlite containment area, into Stream C3, Fisheries and Oceans supports Environment Canada as the lead for water quality in determining the best available technology for the treatment of mine effluent. However, Fisheries and Oceans is concerned that excessive flows discharging into Stream C3 from the processed kimberlite containment area may lead to erosion along the flow path of Stream C3.

Fisheries and Oceans, therefore, recommends that the mitigation plan developed for Stream C3 ensure that fish habitat is maintained or improved over existing conditions. Furthermore, Fisheries and Oceans encourages the Board to consider those options and scenarios that ensure rigorous protection of water quality, while still maintaining water flows in Stream C3 to the extent possible to benefit fish and fish habitat.

The fourth concern involves the use of explosives adjacent to fish habitat during operations. The Fisheries and Oceans guidelines for the use of explosives in or near Canadian

fisheries water provides guidance on protecting fish and fish habitat. However, the approach taken by Tahera did not include Stream C1 in their assessment. Tahera did revise their assessment to include Stream C1 and has agreed to incorporate mitigation measures, such as timing, into their blasting plan to ensure impacts to fish are minimized in Carat Lake and Stream C1.

Due to the construction of the processed kimberlite containment area, Tahera will be required to dewater Long Lake and, therefore, develop a fish salvage program specific to the water body. The development of this program still needs to determine the end use of fish through input from local communities.

And now, if I can provide a brief overview of the no net loss plan, which was developed to address the loss of fish habitat associated with the Jericho diamond project. Through investigations in the affected watershed by Tahera, it was identified that rearing and foraging habitat is limiting. Therefore, the development of underwater shoals will address this need and provide habitat for all age classes and species of fish in the affected watersheds.

The following diagram provides an overview of

the locations and extent of enhancement measures identified in the no net loss plan. As you can see, the development of shoals occurs in Carat Lake, Interbasin Lake, Lake 01, 03 and 04. Do I need to point those out? If someone has a pointer, I can do that. Carat Lake, interbasin is in here, and then there is a series of 0 series lakes up in here, there is similar-type compensation. Up here, down there, and I think it is in here.

Although several minor items need to be addressed in the final version, Fisheries and Oceans is prepared to accept the conceptual no net loss plan. The minor items to be addressed include the provision of detailed drawings, which include the incorporation of various diversity measures, and the development of an appropriate mitigation plan which minimizes the impacts to fish and fish habitat.

Furthermore, Tahera agreed to revise the monitoring plan under the no net loss plan to include the provision of adequate baseline fisheries data, which will demonstrate the effectiveness of the enhancement measures. As well, consistent with similar projects of this scale, performance bonding will be required by Fisheries and Oceans prior to issuing the Fisheries

Act authorization.

Over all, Fisheries and Oceans is satisfied that the submission to the Water Board by Tahera, in addition to our recommendations, will adequately address the impacts to fish and fish habitat as presented by Fisheries and Oceans. Fisheries and Oceans is confident the no net loss plan will adequately address the residual losses to fish habitat within Carat Lake and the O series watersheds.

In closing, Fisheries and Oceans would like to thank the Water Board for providing us the opportunity to participate in the Water Board hearings, and encourage the Board to consider our recommendations to minimize impacts to fish and fish habitat. Thank you.

CHAIRMAN: Thank you, Derrik. Any questions from the applicant?

GREG MISSAL: Mr. Chair, Greg Missal with Tahera. If we could possibly just get a few minutes just to get our heads around if we do have questions or not, that would be great. Five, thank you very much.

CHAIRMAN: Thank you. We will give you five minutes.

(BRIEF ADJOURNMENT)

CHAIRMAN: Welcome back. I believe there was some questions from the applicant.

GREG MISSAL: Thank you very much, Mr. Chair. Greg Missal, Tahera Diamond Corporation. I think we essentially don't have any questions of DFO at this time. Essentially, DFO's presentation confirms and conforms to the presentation which Tahera made yesterday. And our views are consistent, and therefore there is no need for questions from Tahera at this time.

CHAIRMAN: Thank you. DIAND?

GLEN STEPHENS: No, sir.

CHAIRMAN: Thank you.

Environment Canada?

ANNE WILSON: No questions, thanks.

CHAIRMAN: Thank you. NTI?

JEANNIE EHALOAK: No questions.

CHAIRMAN: Thank you. KIA?

JOHN DONIHEE: No questions, sir.

CHAIRMAN: Thank you. Hamlet of Kugluktuk, any questions?

HAMLET OF KUGLUKTUK QUESTIONS DFO:

Q MAYOR TAPTUNA: Yes, sir. Okay. Thank you, Mr. Chairman. I have got a question here for DFO. How often are the lakes being hatched or

actually fished, and are they harvested? Does DFO know the answer to that?

A DERRIK MOGGY: I don't think there is a lot of harvesting and fish net does go on in those specific lakes that are being enhanced.

Q MAYOR TAPTUNA: I have got another question here. Peter Taptuna, Hamlet of Kugluktuk. Why is DFO requiring Tahera to enhance lakes that aren't important to harvesting with no information on the use of lakes for subsistence from the communities? And I guess a follow-up question too, did DFO consult with any community such as Bathurst Inlet, outpost people of Contwoyto Lake before setting up a conceptual plan with Tahera on the enhancements of the lakes?

A DERRIK MOGGY: Our policy for the management of fish habitat goes through a hierarchy of preferences. Lost habitat, our first preference for any lost habitat is to create it as close to the site as possible. So consistent with that, the loss of Long Lake was identified as the largest impact, so we tried to create enhancements within that general area, as best we could.

In terms of talking with the community, no, we hadn't did that. And I realize that there was -- one of your intervention comments had identified

some opportunities within Kugluktuk that we weren't aware of previously. Certainly interested to know more about those projects due to more mining projects that will probably come along in the future, that we could consider those as well.

Q MAYOR TAPTUNA: Peter Taptuna, Hamlet of Kugluktuk. Has DFO conducted any regional scale for fish habitat needs assessment studies in and around that area, including regionally?

A DERRIK MOGGY: The office in Iqaluit has not conducted any of those types of surveys. I think it is a great idea, and I would certainly be willing to talk with some of the communities, HTOs, and look for opportunities to be able to enhance habitat where there is opportunities to do so, any habitat that may have been impacted in the past. For some of these types of projects, I think those are great ideas.

Q MAYOR TAPTUNA: Peter Taptuna, Hamlet of Kugluktuk. My final question, the approval of the no net loss plan and the water license, are they a parallel process, or how are they related? For example, if fish compensation projects were to cause any further water use, would a water license amendment be necessary?

A DERRIK MOGGY: They are separate

processes. There would be a water license permit versus a Fisheries Act authorization. I'm not sure how the Water Board would look at some of the enhancements, but they would be separate licences that we are trying to coordinate as best as possible through this process.

MAYOR TAPTUNA: Thank you. Thank you, Mr. Chairman.

CHAIRMAN: Thank you.

Mr. Donihee?

KIA QUESTIONS DFO:

Q JOHN DONIHEE: Thank you, Mr. Chairman, counsel for the KIA. Mr. Moggy, I take in response to the questions that you were asked that what you said was that DFO is prepared to issue a fisheries authorization which will destroy fisheries habitat and result in the fishing out of lakes which are subject to Inuit rights to harvest fish, and that you have not consulted with the communities, and that you are prepared to go on this without consulting?

A DERRIK MOGGY: I could certainly discuss -- the no net loss plan is available on the FTP site. I could make that available to anyone who is interested to determine if there was any further interest or comments on that.

Q JOHN DONIHEE: John Donihee, again. Thank you. I have read the no net loss policy several times. I guess my concern is that, you know, Inuit have land claims rights, Aboriginal rights protected under the Constitution. If you are about to issue a regulatory authorization that infringes them, I think you have some pretty clear legal obligations to consult with the communities, and I will just leave that with you.

CHAIRMAN: Independent consultants, any questions? No. Thank you. Any questions from the Water Board staff? Steve?

WATER BOARD STAFF QUESTIONS DFO:

Q STEPHEN LINES: Thank you, Mr. Chairman. My first question was regarding monitoring the effects of sedimentation near the causeway. And in the DFO submission, it referred to, I guess, reference sites that compare sedimentation along the causeway, and I'm just wondering where those proposed reference sites are located, and whether or not this monitoring would be a part of operational management plan or part of the aquatic effects monitoring program? Thank you. And what would DFO recommend in this case?

A DERRIK MOGGY: First off, the monitoring would be included under the aquatic

effects monitoring program, I believe that's where it has been put currently.

With respect to the level or the amount of monitoring, I would believe it is just a station that would be set up that would periodically be monitored several times a year.

Q STEPHEN LINES: Thank you, Mr. Chairman. And where would their reference sites be located?

A The reference sites, whereabouts did you -- what are you referring to, I guess, when you say the reference sites?

RICK PATTENDEN: Mr. Chair, excuse me. If I could clarify, the reference sites will be those that are currently proposed in the aquatic effects monitoring program. I believe there is a sediment site on the control lake, and that would be the reference lake.

And in regards to frequency, we are monitoring deposition rates, so site sampling stations will be -- will commence early in the spring, and then the sites will be sampled at the end of -- the spring the following year, so we have a sediment deposition rate per year. In addition to that, there would be spot TSS or turbidity measurements off the causeway.

Q STEPHEN LINES: Mr. Chairman, just to point out, in the DFO submission, that that monitoring was to be compared to reference sites to ascertain -- and this is a quote from the DFO submission, "to ascertain whether there is an increase in sediment deposition rate." So I was just wondering, were those reference sites clarified or --

A DERRIK MOGGY: I believe Rick can answer that question that there will be some reference sites set up, and that will be compared back to that then.

Q STEPHEN LINES: Mr. Chairman, second question. How do you assess the success, or how does DFO assess the success of a fishery location program?

A DERRIK MOGGY: The objective of the fishery location program is to identify a site that slimy sculpin and burbot would be appropriately located. And if they -- well, they move them live, fish, to ensure that they survive. And that would be a good indication that there was success.

Q STEPHEN LINES: The third question -- Mr. Chairman, sorry, it is Stephen Lines -- was regarding the repairing vegetation to be placed along the diversion of Stream C1. And how long

would it take to establish repairing vegetation along the embankments?

A DERRIK MOGGY: I am not aware of it having been done so far. It is an opportunity to be able to try, at this location, to see whether this is successful or not. It is a key component further upstream that is missing, that will be missing from the channel, and it is something that is providing nutrients into the stream for fish further downstream. So the possibility, and it was -- basically the discussions with Tahera to look at the feasibility of incorporating that, creating conditions that would optimize that and not necessarily require it, but at least will look at whether that is a possibility and to try it at several spots along the channel.

Q STEPHEN LINES: Thank you. Thank you, Mr. Chairman. What is the extent of the fish habitat in Stream C3, and how does DFO go about verifying the information presented by Tahera?

A DERRIK MOGGY: Tahera's consultants have collected information along that stream over -- I'm not too sure how long, close to ten years. Done electrode fishing along the channel, and then channel characterization to identify what types of fish species and age classes have been identified

along there. So there is a fairly extensive data to support what they see up there.

Q STEPHEN LINES: Thank you. My last question, Mr. Chairman, before I pass it over to Dionne. Also in the submission it had stated that DFO would like to see the access to the upper reaches of strap C1 improved if it is shown that fish can't pass through there easily. And I'm wondering if that access is facilitated, would that make the fish or the fish eggs more susceptible to the blasting effects from the open pit?

A The channel probably isn't going to be constructed right away. The blasting will occur, I believe in years -- in the first several years. As Rick's presentation yesterday that the blasting impacts will become progressively further away from the channel. And initially the channel, once it is put on line, we are suggesting that temporary coffer dams be set up within there to help control sediment. So it is not likely that fish will be able to get up early on, probably not until later would there be a possibility of, if it is possible for fish to access that. And at that point, impacts from blasting will be further away from the channel. So it shouldn't be an issue at that point.

STEPHEN LINES: Thank you.

Q DIONNE FILIATRAULT: Thank you, Mr. Chairman. Derrik, I'm wondering if you could just clarify a little bit for the Board the issue of performance bonding and how that is secured or required by DFO and what it covers?

A DERRIK MOGGY: The issue of performance bonding is a common element in the authorizations that we issue for projects of this scale and nature. The diamond projects in the NWT included this element as well.

What we generally -- the approach that we take is to have a cost breakdown provided for the habitat enhancement and the monitoring required, and those would include the causeway reclamation, Stream C1 fish-friendly features, and the enhancement in Carat Lake interbasin and the O series of lakes. That cost breakdown is reviewed by DFO, a letter of credit is prepared, and the conditions are incorporated into the authorization.

Q DIONNE FILIATRAULT: Thank you, Mr. Chairman. Could you clarify for me, is the causeway, intake causeway classified as an area of habitat compensation at closure?

A DERRIK MOGGY: The intent is to reclaim a portion of the causeway such that an

underwater shoal will be created. I believe it is about two metres below the water surface to create some habitat diversity in there, so that's the intent.

Q DIONNE FILIATRAULT: In your opinion, in the areas of overlap, and I see a potential overlap, from what DFO requires for habitat performance bonding to ensure that habitat is created as committed to by the proponent or agreed to in the no net loss plan, with -- and some monitoring associated with that, with actual remediation that is required for infrastructure? And I use the causeway as the example, in that the causeway, in the security estimates that the Board is looking at, there are dollars associated with the remediation of that site, and I am wondering if this, in your view, constitutes a double dipping between what our Board -- what the Nunavut Water Board is going to be requiring for security, and what you, in turn, require for performance bonding?

A DERRIK MOGGY: I see the causeway, I guess, as a possibility. I don't think any of the other elements would be. Our intent is to create improved habitat at that area, and I suspect that if that would meet the intent of the Water Board, that DFO would be willing to take the lead on that

specific portion.

I'm not too sure if the Water Board, will you be requesting, I guess, security for the reclamation of the causeway?

Q DIONNE FILIATRAULT: I would suggest to you that, yes, it is a major component that has impacts to water. Ultimately the decision rests with the Board, but it is something that they will be discussing.

For this Board to assume that you would be taking a lead in that area and for it to be applied, if you will, as a credit to any number that the Board -- this Board comes up with, we would need to know what number you are proposing to ensure that they are comfortable with the fact that, you know, a hundred percent reclamation bonding or security is applied for the project.

Does DFO, at this point, know what value, or does Tahera hold any security, performance bonding with you currently, and do you have a projected estimate value broken done for the components of compensation that you are requiring under your projected no net loss plan?

A DERRIK MOGGY: DFO doesn't have a number right now. We have started off by allowing Tahera to provide a cost breakdown for the