life. INAC accepts the aquatic thresholds proposed for all but one parameter, aluminium, and recommends follow-up geochemistry work to confirm Tahera's assumptions and proposed aquatic thresholds.

Discharge criteria recommended by INAC are similar to other diamond mines in the north. For cadmium, copper and uranium, regular monitoring of fish or zooplankton populations and species compositions have been recommended to detect potential impacts on the most vulnerable aquatic ecosystem component for each parameter.

Discharge criteria for nutrients. Discharge limits as proposed by Tahera for ammonia, nitrate and nitrite appear to be unnecessarily high. Recommendations have been presented for the Board's consideration to minimize loading to the Jericho River system and to encourage prudent explosives management.

Under the Territorial Land Use Regulations, INAC will negotiate, issue and enforce instruments of land tenure for the portion of the project on land with surface rights held by the Crown, as well as continue to administer subsurface mineral rights.

Tahera has satisfactorily addressed many of

INAC's concerns related to land surface and permafrost disturbance in its application and supplementary information provided during the technical review period.

In general, the major outstanding issue is the design and construction of the PKCA divider dike. Tahera has not presented a fully engineered design for the divider dike. However, in response to INAC's request during the technical meeting, Tahera has submitted a conceptual outline of the proposed PKCA divider dike. INAC accepts this outline; however, this submission of a fully engineered design plan for the PKCA divider dike should be included as a condition of the water license.

In addition, INAC offers the following recommendations: assessment of the durability of coarse PK as a filter and cover material once it is available; assessment of the erosion protection requirements for Stream C3 and plan accordingly; preparation of a conceptual design for the landfill and land management plans; and preparation of an overburden reclamation plan that addresses how the overburden will be reclaimed from the stockpiles, with particular reference to control of melt water and suspended sediment discharge during the

stockpile farming and harvesting.

Tahera has submitted a detailed spill contingency plan with their application. INAC is satisfied with the plan at this stage. However, the existing spill plan will have to be modified and updated on a regular basis, particular once Tahera moves from the construction to the production phase of the operation. The plan should be updated and submitted to the Nunavut Water Board for review and approval at least annually.

Tahera has also proposed using a land farm to remediate fuel contaminated soils. INAC supports this idea; however, the land farm should be maintained and monitored to ensure that it is performing as intended.

While INAC accepts the proposed operation and closure of the site, there is sufficient uncertainty that we are recommending several improvements to the monitoring plan. Tahera should continue operating the stream flow gauging stations on small streams in the Jericho watershed. These data will be necessary to confirm impact predictions. A recording water level station should be established and maintained at the outlet of Carat Lake to provide for the development of a rating curve to assist in the characterization of

the stage versus discharge relationship for Carat Lake.

The effluent quality in the PKCA is a result of inflow from the processing plant, runoff from the waste and stockpiles and sewage, all having flows and chemical compositions. INAC recommends monitoring effluent from sources potentially flowing into the PKCA to determine the quality and quantity from these sources.

All of these inputs determine the quality and quantity of effluent in the PKCA. INAC suggests that monitoring also include PKCA effluent prior to discharge to the environment to assess whether mitigation is required.

Tahera's water licence application has addressed the fundamental concerns regarding the site water balance. However, this should be reviewed and updated periodically.

Additional rating curves for discharge in the PKCA spillway should be developed and adjusted as required to reflect any changes in site water balance.

It is recommended that Tahera continue to operate the two Jericho climate stations to enable a better correlation between the Lupin airport and site precipitation data. This will confirm that

the Lupin record is, in fact, a good predictor of long-term precipitation regime at the Jericho site.

As part of the water license conditions, the geotechnical monitoring plan should include all major earthworks retention structures, dams and diverse structures, stockpiles, dumps, berms, as well as open pit slopes.

Tahera should also be requested to forward to the Nunavut Water Board copies of all operational inspection reports for the open pit and underground mine requirements under other legislation.

The geochemistry and associated water quality monitoring proposed by Tahera is considered incomplete or insufficient in some aspects to adequately characterize waste solids and associated water quality. INAC recommends changes to the characterization study to ensure an improved understanding of possible implications to water quality.

This includes improved characterization of waste rock leachate and solids, overburden, low-grade and coarse kimberlite stockpiles and recovery rejects. This will allow more rapid assessment of characteristics to determine whether special handling or planning is required. It will also allow a better understanding of inputs to the

PKCA and improving planning and management onsite.

Furthermore, INAC recommends the addition of benthos to the list of indicators to be monitored at stations SNP2, SNP5 and SNP17.

There is a universal concern about what will happen at this site when the mining operation ceases. INAC acknowledges that abandonment and restoration plans must be flexible in order to accommodate changing circumstances over the life of the mine.

The following discussions are intended to provide an overview of what INAC expects in the way of abandonment and reclamation plans.

INAC, through the mine site reclamation policy for Nunavut, outlines its policy for the protection of the environment and the disposition of liability related to mine closures in Nunavut. I am pleased to submit this policy to the Nunavut Water Board as part of our intervention.

In general, it is based on returning sites to viable and, where practical, self-sustaining ecosystems. To meet this general objective, reclamation estimates are determined based on the unlikely situation that the operator has defaulted and it is up to the Crown to reclaim the site. It is also based on a third-party contractor

completing the work onsite, and that the work is in relation to land and water.

The abandonment and reclamation plan prepared by Tahera is substantially acceptable. There are some issues still remaining that may affect ultimate closure of the site. INAC hopes the recommendations discussed so far will address these issues. The estimated total cost for reclamation of the Jericho diamond mine, including a provision for post-closure monitoring, is estimated to be $9.02 million. No post-closure water management is expected; however, there is uncertainty with respect to the potential effects of uranium leeching and possibly other metals such as copper. It is recommended that laboratory and field testing be conducted as soon as material is available. Furthermore, should such testing show that leeching could occur, then the closure plan and security costs should be reassessed.

It is highly recommended that this estimate be reviewed one year after the start of operations to ensure that INAC and the other landowners are not exposed to unsecured liability.

The water license and land leases should include provisions for annual adjustments to the reclamation security. An updated A&R plan should

be submitted in year three to the Water Board for review and approval. The updated plan should incorporate revisions based on all monitoring data collected to that time and should include an updated prediction of pit fill rate and water quality effluent discharge after closure.

INAC strongly recommends that the Water Board, in determining reclamation security to be held under the water license, include the water-related liabilities only. Land-related liability should be negotiated between INAC lands and the Kitikmeot Inuit Association as part of the land tenure process.

If the Nunavut Water Board accepts INAC's recommendations, the water-related liability will amount to $1.64 million. In this case, the remainder of the total estimated security cost would be included as a component of the land tenure instruments.

While INAC is, at this time, requesting that land and water liability be split, any revisions to the A&R plan should trigger a security review under both the water license and the land leases. The terms and conditions under these documents should reflect this.

Overall, INAC is pleased with Tahera's

application. INAC commends Tahera for their cooperation and professionalism during the course of the environmental review and water licensing process.

INAC is confident that Tahera will be able to operate a diamond mine in an environmentally sound fashion, and at the same time provide meaningful and rewarding employment opportunities for Nunavumiiut.

INAC looks forward to a continued and productive working relationship with Tahera, the Nunavut Water Board and other relevant stakeholders. Koana.

CHAIRMAN: Okay. Thank you. Do you wish to add anything else there?

GLEN STEPHENS: No, Mr. Chairman.

CHAIRMAN: Thank you. I believe Environment Canada is next to make their presentation. Thank you, gentlemen.

Okay. Does the applicant have any questions with the DIAND presentation? I believe Tahera has questions for DIAND.

GREG MISSAL: Thank you, Mr. Chair. Greg Missal with Tahera Diamond Corporation. If we could take a quick break to compose our questions?

CHAIRMAN: Okay. We will take a

ten-minute break.

(BRIEF ADJOURNMENT)

CHAIRMAN: Welcome back. Before we proceed, I would like to welcome and recognize Brad Peterson (phonetic), the former MLA and long-time resident of Kugluktuk. Welcome Mr. Peterson. Thank you.

I do believe Tahera has some questions to ask DIAND. Thank you.

LICENSEE QUESTIONS DIAND:

Q GREG MISSAL: Thank you, Mr. Chairman. Greg Missal with Tahera Diamond Corporation. I guess a couple of comments that I want to make first off, and specifically a comment that I would make, and the first one would be that Tahera agrees with the reclamation deposit that was presented in the DIAND presentation. Obviously it worked out to be very similar to the one that we had prepared, so we do agree with that deposit.

Just on that same topic, as long as I have gotten this straight, there was, I think, a request made that the amount be reviewed annually, and I think we would slightly disagree with that and suggest that when it was updated, I think the suggestion was made it was planned to do in one year, updated in year three to the NWB, that

perhaps at that year three is when the amount should be reviewed as well. That was my take on that. If I didn't quite interpret that right, I ask for clarification from INAC on that point.

And I guess just another question, and I'm not sure it -- perhaps maybe Carl could answer this. I guess in terms of the land portion of the reclamation deposit, if the scheduling of that would be, I guess, determined at the time of the company and INAC completing the land leases. So maybe I would just ask for a clarification on those two points.

GLEN STEPHENS: Mr. Chairman, we will be referring the issue of security to John Brodie.

A ELIZABETH SHERLOCK: Mr. Stephens, I am going to take this for us, please. Elizabeth Sherlock.

In making that proposal to review it annually, we recognize that there is quite a bit of uncertainty, and we would like to see a little bit more active reviewing and planning happening early on in the phases of this operation.

I think we would look at in the future, once we have some comfort with what is happening onsite and what is planned for closure, at revisiting the timing for reviewing. But I think given the short

mine life and the uncertainties, we would like to see a much more annual and periodic review of the plan and of the estimated costs.

CARL McLEAN: Mr. Chair, Carl McLean, manager of lands, INAC. With regards to the security that we will be collecting under the Crown land leases, that security will be negotiated through those instruments using the Nunavut mine site reclamation policy as our guide.

GREG MISSAL: Thank you very much. Mr. Chair, I would now like to, I guess, run through the questions that our group has here, starting with Rick Pattenden.

Q RICK PATTENDEN: Mr. Chair, my questions, comments relate specifically with INAC's recommendations pertaining to the aquatic effects monitoring program.

My first is in reference to Section 3.1.2.2 of their submission titled "Parameters With Site-Specific Aquatic Thresholds." My comment is in relation to their recommendation for cadmium, which states that Tahera monitor levels of cadmium in sculpin flesh from specimens taken from Lake C3, Carat Lake and one background reference lake prior to construction, and once every two to three years the same should be done using lake trout, whitefish

prior to construction, and at the end of operations or after eight years, whichever comes first.

The current aquatic effects monitoring program is sampling whole sculpin, as well as lake trout and round whitefish tissue in the three lakes that have been recommended. My comment is only that our frequency is once every four years, whereas INAC has suggested once every two or three years for sculpin. We think that our frequency of sampling of once every four years is adequate to detect a change, if one occurs, and it also protects the fish populations from the overharvesting, if you want to put it that way.

My next question is in regards to INAC's submission in regards to the addition of benthos at other sites as part of the aquatic effects monitoring program, it is Section 4.5 in their submission. In their submission, a recommendation on page 26, INAC recommends the addition of benthos with the list of indicators to be monitored at stations SNP2, SNP3, which has been corrected to SNP5 and SNP10. SNP2 represents the Stream C3. SNP5 represents the south basin station in Lake C3, and SNP10 represents the centre basin of Carat Lake.

In their presentation that they have just

provided, they list SNP2, SNP5, and SNP17. SNP17 is Lake C3 at the mouth of Stream C3. I just require clarification as to which sites INAC would like benthos added to.

A DAVE OSMOND: Mr. Chair, the first question relates to fish tissue regarding cadmium bioaccumulation. And the intent of using sculpins on a more frequent sampling frequency is strictly to keep track of what things are happening from the point of view of tissue bioaccumulation in sculpins. And I don't think it is really worth arguing this point. I think once every four years is fine, and I would just like to suggest to Tahera that perhaps rather than whole fish, if we could have liver bioaccumulation for cadmium, I think it would be great if we could get liver samples, as it is often a preferred target within the Native community for feeding. So if we could split out the liver, that would be great for that.

So I'm agreeable to once every four years. I was trying to keep the number of samplings down about the same, I guess once every four years. And I would ask that is there a sampling before start-up on background fish tissue sampling?

Q RICK PATTENDEN: Mr. Chair, Rick Pattenden. There is background sampling that has

just been completed. There is also sampling of liver in lake trout and round whitefish. Liver sampling has not been completed for sculpin, they are simply too small to obtain a sample large enough to analyze. But liver is being collected.

A DAVE OSMOND: Thank you. I'm Dave Osmond. That's great. I'm quite happy with that, and we don't have to do anything with the sculpin liver sampling.

The next question dealt with additional aquatic effects monitoring in Lake C3 and in Carat Lake. And in the process of putting this together, I was able to get further information, and that's why the number of sampling stations changed.

And what you saw today in our presentation is what we were interested in achieving, was SNP2 for benthos, SNP17, which is right at the mouth, right in Lake C3 at the mouth of Creek C3, and SNP5 which is beyond the -- I would say it is beyond the mixing zone. What I imagine is its location appears to be beyond the mixing zone. Those are the three stations that I feel would be very useful.

Their aquatic effects, and I think they are for aquatic effects purposes, but I think that SNP2, which is in Creek C3 at the mouth, would be

useful from an operations point of view. To be able to determine whether or not there is effects at the mouth of that creek, it must be appreciated that during the wintertime, there is no flow coming out of -- or down C3, Creek C3. And for that reason, the benthic community would be expected to be pretty insignificant. But I think with the use of artificial substrates, for example, perhaps in just the right location, you can probably collect organisms there and determine what kind of life is living there in the creek.

It is very compelling if there is life living in the creek before it hits the lake to be able to get a good idea of what the effects are before dilution or anything, and oftentimes that's a really good argument in favour or against some of the guideline or discharge limits that may be produced.

So the other point is that I understand that the sampling criteria for benthic organisms that the proponent has suggested is, I think it is a four-metre depth minimum or maximum. SNP5 is in deep water, and I ask that if they could find somewhere in the general vicinity of SNP5 in the four-metre depth area, that would be fine. It doesn't have to be exactly in that location, Mr.

Chair. That's it.

Q RICK PATTENDEN: Mr. Chair, Rick Pattenden. In response to INAC's request to add benthos to three sites, SNP17, which is in Lake C3, at the mouth of Stream C3, that is currently a benthos station within the AMP, so benthos will be monitored at that site.

In regards to SM5, I am recommending to Tahera that they add benthos to that site. In regards to SNP2, which is within Stream C3, although I agree with INAC's consultant that it would be a good idea to monitor within this stream, there are several serious constraints to that site, one of which is the potential for dewatering even during summer. The other is being able to obtain enough data to show you something, and the third is to follow proper monitoring protocols that we will require a control stream for comparison, and that has not been part of our aquatic effects monitoring program.

So adding Stream C3 to the ANP is problematic, and I don't think the information that would be collected would provide any real benefit to the program.

A DAVE OSMOND: Dave Osmond. I need clarification then, if I can, from Tahera as to the

location of SNP17 with regard to the distance out from the mouth of the creek.

Q RICK PATTENDEN: Mr. Chair, Rick Pattenden. I don't have the exact number with me, but SNP17 is located directly off of the mouth of Stream C3 in four metres of water, within 30 metres of the mouth, so that's the approximate location.

A DAVE OSMOND: Dave Osmond. That being the case, I think that SNP17 is going to be within the zone of effect of the discharge, and I think it will be a good alternative to SNP2 within the creek, and I have no problem with that.

You had already planned that one, but I thought that this would be as helpful to the company as it would be to all of the regulators involved. So if you choose not to use it, that's your choice. Thank you.

Q BRUCE OTT: Bruce Ott, AMEC. Mr. Chair, I only have one question for clarification, probably from Dave Osmond.

And I would like to note a correction, I believe, in Section 4.4, over a couple of pages, waste rock leachate and solids. Under Geochemistry Monitoring, which is Section 4.4, if the pagination hasn't changed with the printers, it is my page 24. There is a note about daily blast analysis

analyzed, and I believe that should be weekly. And I believe that was what was in our -- excuse me, I am suffering from the same thing that Mr. Stephens was -- what was in our amended summary monitoring report.

If I can just leave that. There is one other correction, and that is that -- and this has probably crept in because of the press of time. In Section 2.5, Roads and Winter Road, on page 7 under Context Rationale of the Issue, in setting the background, the all-weather road between Contwoyto Lake and the site seems to have crept back in. That was something that between the final EIS and the submission for the water license has changed. And Mr. Missal can correct me if I am wrong, my understanding is that because of requirements to the Explosives Act, that there cannot be a supply road that goes that close to where the ammonia -- ammonium nitrate storage will be and where the explosives plant would be. And I believe the company is now planning to build the winter road every year. So those first two paragraphs, while it doesn't change the conclusions or the recommendation, I believe those two paragraphs are incorrect at this point. And I think that's a rather small point, Mr. Chair.

A DAVE OSMOND: Thanks for that, Bruce. And if we said daily on the waste rock leachate and solids and indeed it is weekly, that's fine. I am sure it was in the -- as a result of the time that we had, and the fact that one of our members that put this recommendation was off in Europe at the time. It was a complicated time for us, just like your trip to Africa last year.

And, Mr. Chairman, I'm sorry, it is Dave Osmond. I should be addressing you here on this. The information on winter road, I have very little knowledge of this part, but I think the whole team here takes your point, and we will incorporate that. And I don't think it is going to create any kind of a problem here. Thank you.

Q BRUCE OTT: Mr. Chairman, the main point that I have is the point of clarification, and it is in Section 3.1.2.2 which discusses parameters with site-specific aquatic thresholds, and we need to go over to page 20, which is under recommendations for uranium.

Now, in that section, there are three bullets, and the third bullet, I will read it as follows, if I may,

"During the period of discharge, a 24-hour composite sample of undiluted effluent be

collected monthly. Bioassays be conducted on Ceriodaphnia dubia and Daphnia magna and results evaluated in the context of potential chronic effects at the edge of the 200-metre mixing zone."

Now, my question to INAC is, in the first place, my understanding is that if we are looking at a test for discharge from the PKCA, that the biological test is acute toxicity, and Daphnia magna is one of those. Ceriodaphnia dubia, if my understanding is correct, is a chronic toxicity test which takes 21 days.

I'm not quite sure how that is supposed to be relevant for the end of pipe discharge. I'm also not quite sure what that is supposed to tell us with respect to the 200-metre mixing zone. Finally, what we have suggested, and, again, I can stand to be corrected, but what my understanding of what Environment Canada has suggested is that acute toxicity testing be done prior to discharge and at the end of discharge.

What Tahera has offered to do, in addition to that, is a microtox screening test, which we discussed in some detail earlier today. And I believe that that approach, coupled with retesting for acute toxicity if the microtox tests should