

NUNAVUT WATER BOARD
Public Hearing
Iqaluit Municipal Water License Renewal

November 23, 2000

Chairperson: Thomas Kudloo

[TK = Thomas Kudloo
MH = Matthew Hough
JG = Jordan DeGroot

[JT = John Tidball
LW = Lee Webber
MM = Marcel Mason

[BT = Bill Tilleman
AW = Anne Wilson
SP = Unidentified Speaker]

[Start of Tape 2 - Side A]

TK: ...not registered, please do so with the Licensing Administrator, Rita Becker. And please, when you make a comment or statement, please remember to state your name.

Good morning. We shall reconvene. At this time I would like to ask the municipality of Iqaluit to make their presentation. Thank-you.

JT: My name's John Tidball. That, Mr. Hanson, doesn't count. Next time I'll try to keep...

As I said yesterday, we're going to go through the issues one at a time, and I will be introducing them, and then Mr. Hough will be speaking to each of the issues.

The first one is in relation to the use of water for municipal purposes. There are two issues under that topic. Or, we consider them to be two issues. The first has to do with long-term water supply, and the second has to do with the Lake Geraldine dam.

First of all, on the long-term water supply, the Board will note that in the application, the application asks for the applicant to indicate how much water is going to be needed under the license, and what we did - and Mr. Hough can describe this if you have questions - but what we did is actually put in the amount of water that the municipality is using, plus a little bit. So, you will see that there is... the application is for 1.2 million litres of water per day, on average.

Traditionally, the license has been expressed of cubic metres of water per year, and I notice that in the submission - the joint submission made by the three federal departments - their suggestion was that the license remain at 1.1 million cubic metres of water per year, and I just wanted to say at the outset we're fine with that, and we didn't necessarily intend that it would be any different in the new license. We were trying to be accurate in the license and that was all.

So, first of all, on the issue of long-term water supply, I'm going to ask Mr. Hough to speak to that issue.

MH: Good morning. My name is Matthew Hough with the municipality of Iqaluit.

On the issue of long-term water supply, it is our submission that a new long-term source is needed, within five years, to service rapid growth. The word "source" is a little misleading. Next year we are planning on retaining a consultant to study long-term water supply options. We want that consultant to look at our present Lake Geraldine, the watershed that services Lake Geraldine, and the capacity of our water treatment plant. We know that our water treatment plant needs upgrading and re-sizing to suit the growth of the town for the next 20 years. We know that Lake Geraldine may be able to handle that growth over the next 20 years. However, we want to ensure that that is exactly the case. So, next year we will be retaining a consultant to do just that.

We agree with the federal departments that the study should include hydrologic assessment of Lake Geraldine, an assessment of the environmental impacts of increasing draw-down. And we also request until December 31st, 2001 to submit the study, if the Board feels this condition is necessary.

JT: Mr. Chairman, there was a document left on the table over there, and I don't know if the Board has it yet. You'll recall that we had a discussion yesterday about some proposed wording for conditions, and we prepared a one-page document that I don't think's been marked as an exhibit yet, or perhaps it has.

TK: Bill?

BT: Mr. Chairman, we've marked that as Exhibit #6, which is the new conditions proposed by the municipality.

TK: Thank-you.

JT: Does the Board have copies of it? The first condition, there, speaks to this issue, and you'll recall Mr. Hough just said the municipality would like to the end of next year to do this report. What we put together as a condition, if the Board is inclined to attach a condition to the license, then it would simply say - it's the first one there - the licensee shall submit to the Board by December 31, 2001, a report on long-term water supply options for the municipality of Iqaluit.

I should say - and I will pick this up on the way through - our intention was that condition would replace the existing Condition 7 under Part C of the license, and rather than take a lot of time to go through that I'll sort of pick this up at the end, but if you wanted to make a note of that, that's what we're proposing.

The next issue that has to do with water supply has to do with the integrity of the Lake Geraldine dam, and I'll ask Mr. Hough to speak to that issue, as well.

MH: Matthew Hough again. With respect to Lake Geraldine dam, we are unclear for the basis of the concerns with the Lake Geraldine dam. To the best of our knowledge, the dam is structurally sound. Since 1997, when improvements were made, the dam has been inspected several times by our consulting engineers and no problems have been noted. I spoke to them this week on this particular topic, after going through the submissions by the interveners, and they've assured me that, once again, the dam is structurally sound. The dam has a concrete core. That core was part of the re-construction, and over the top of it is where the dykes are placed.

The condition of the dam is also being evaluated as part of a risk assessment commission by the GN in relation to a new hospital. The federal departments state that their concern's regarding the dam's stability have not yet been adequately addressed. We have reviewed DIAND's 1999 submissions to the Board, and the transcript of the hearing, and there is no discussion of why DIAND is concerned. From Iqaluit's perspective, it is vitally important that we maintain the integrity of the Lake Geraldine dam. The Board can be assured that we intend to do so regardless of any condition that may be imposed. We simply don't believe that a formal geotechnical inspection and report is justified.

Upon recruiting the consultant for the study that I referred to in the last section, we will also be formulating along-term O&M plan for our water supply, and as part of that particular study, there would be a schedule for inspections. And we request that the Board not re-impose Condition C-5 and C-6 in the new water license.

JT: The next section that we're going to deal with is getting into the area of waste disposal into water, and first of all dealing with sewage treatment.

The first issue that's been identified as of interest to the various parties is the status of the new sewage treatment plant, and I'm sure that's something that will be of interest to the Board as well. We will be seeing the plant later this morning, and Mr. Hough, I guess, could expand on what he's about to tell you then, but I'll ask him to speak about the plant right now.

MH: Now, as far as the plant system, we described it at the 1999 hearing, and as John referred, we will be seeing it later today and I will describe the process at that point in time again.

To move on, we agree with the Department of Health and Social Services that there will be a vast improvement in the new plant when it's commissioned. Iqaluit is as anxious as anyone to see the new plant opened. The plant is not yet in a position to open, even though it was 90% completed by February of this year. The reasons for the delay are related to construction deficiencies with the concrete in the four tanks, and when we

visit the site later today I will point that out to all Board members. Some of the form work has been removed from the inside of the tanks, and what it reveals is a concrete structure that literally does not hold water. We're doing everything we can right now to repair that. The bonding company is involved, that insures this work. It takes time to do it properly, and time to pay for a problem such as this.

This repair work is proceeding, and should be completed... [tape blank 15 s.] Once the repairs are completed we will proceed to complete the construction, such as the installation of the filters, aeration systems, and commissioning of the plant.

We are still hopeful that the plant will be operational by the spring of 2001. We ask the Board to recognise that we are doing our very best. We want to start up the new plant more than anyone else, and we will do it as soon as we can.

Nothing gained by adopting a suggestion of the federal departments to impose a deadline, unfortunately. There's no difficulty on providing a status report to the Board at the time when the new plant is commission.

JT: Mr. Chairman, on that issue, you will see that the first condition on, I guess it's Exhibit #5, under Conditions Applying to Waste Disposal... I'm sorry, it's Exhibit #6, Conditions Applying for Waste Disposal into water, here's what we're proposing, that the licensee shall direct all piped and pump-out sewage to the sewage treatment plant as soon as the plant is operational. Until that happens - or, the plant is operational - all sewage shall be disposed of in the sewage lagoon.

And then, to pick up on Mr. Hough's last point, there, the licensee shall submit a status report to the Board within seven days of the plant becoming operational, and our thinking on that one is simply it will be a short report to the Board to advise you that the plant is now up and running.

Now, staying with the new sewage treatment plant for a moment, the next issue that is on the list of issues has to do with sewage sludge. At last year's hearing, as I understand it, there was some evidence directed to that issue, and I'd like to ask Mr. Hough to speak to that.

MH: As the plant has yet to be operational, there is no sludge yet. We expect the plant to produce about 5 m³ of sludge per week, and we agree with the Department of Sustainable Development that we need to develop a short-term plan and long-term plan. Our short-term plan is to take the sludge to the current landfill site for composting. We'll place it on an HDP liner, cover it, and test it regularly. Whenever it's in suitable form, we hope to use it as cover material at the landfill site, or in other places.

We agree with the Department of Health and Social Services, and the Department of Sustainable Development, that there isn't much information about composting under Arctic conditions. We hope that our short-term plan will be the pilot project that DSD was asking for last year.

We will need some time to properly evaluate the options for long-term sludge management. We would like to evaluate how composting works, and we are hopeful that the new incinerator for solid waste will also be able to handle sludge.

JT: Mr. Chairman and members of the Board, what we're suggesting is the second condition there under Conditions Applying to Waste Disposal into Water, and we're suggesting that the Board impose a condition requiring the municipality to submit a long-term sludge management plan by no later than the end of next year, that is, December 31st, 2001. In light of what Mr. Hough has just told you, the municipality believes that would be an appropriate period of time to figure out what the options are, and as you'll hear in a few minutes, there will be some finality to the notion of whether or not the incinerator that is to be constructed will be suitable for sewage sludge, and at that point they'll be able to evaluate whether that's the appropriate thing to do or something else should be done. And we'd also suggest that the current condition, Number 9 under Part D, be deleted. This is really to replace that.

The next issue having to do with sewage is the integrity of the dykes at the sewage lagoon. Again, that was an issue that was raised last year, and there are conditions in the current license dealing with it. I'll ask Mr. Hough to speak to that.

MH: The Department of Sustainable Development and the federal departments have requested a geotechnical inspection of the lagoon dykes. Iqaluit does not believe that there is any basis for the request. The dykes were re-built following wash-outs in '81, '87 and '91. The current dykes are approximately double in size from what they were in '91, and no problems with integrity or stability have been noted. A spillway has also been built into the system to ensure that if the level in the lagoon does increase rapidly, that there is an escape mechanism for it.

There was seepage resulting from a build-up of snow and ice at the toe of the west dyke in 1997. Our consultant recommended that the level in the lagoon be lowered, the dam be monitored on a daily basis, and that snow and ice be cleared from the base of the west dyke on a regular basis. We closely monitor the level in the lagoon. We do daily inspections. Although the volume of sewage being discharged to the lagoon is increasing, that does not affect the level maintained in the lagoon. The designed retention time is a minimum of four days. At the moment, we are averaging 6.18.

We see no sign of any problems with the dykes, and do not believe that a formal geotechnical inspection and report is necessary.

JT: Mr. Chairman, if it would assist the Board, I had some difficulty following something Mr. Hough said until he explained to be with a diagram the other day, and that had to do with the problem in 1997 which resulted in the recommendation to lower the level of the dyke. And I think I assumed, as I think many parties and perhaps the Board also assume, that that meant that there was a stability problem with the dyke, and that the level had to be lowered because of that. What Mr. Hough just told you is something different, and if you would like, we could have Mr. Hough sort of draw you a little diagram here to show you what the problem was in '97, and how it was fixed.

MH: Now I know how my professors used to feel!

All right, the west dyke is shaped as such. Now, I apologise for the straightness of my lines. The water level in the lagoon is represented by this, the west dyke represented here, and the toe of the west dyke is what I'm pointing at right now. Now, the toe of the dyke is comprised of a much more coarse granular material than the rest of the dyke itself. When the sewage passes through the dyke, the design calls for it to drop through the toe of the dam and exit as such.

The reason for this is so that if it was ever to be that the sewage goes straight through the dyke, such as that, it will take with it a lot of fine material, which decreases the stability of the dyke. The design calling for it to drop through the toe was marred in 1997 with a build-up of snow and ice in front of the toe. So, the passage of the effluent had no choice but to travel straight through the actual dyke. That's what our consultants found at that point in time, and the recommendations for constant monitoring have been followed.

Now, they also recommended that we lower the level of the lagoon. We have done that, and at to this day it has worked very well for us. We haven't noticed any excessive seepage through the dyke since.

JT: Mr. Chairman, we'll be wrapping this up at the end of the hearing, when we get the chance to go through it one more time, I guess, but our suggestion will be that the current Conditions 6 and 7 in Part B are not necessary, and we're going to be asking you to remove them.

The final issue on sewage disposal is an issue about the closure of the lagoon, how that is to be effected. Again, there was discussion on that issue last year, and I'll ask Mr. Hough to speak to that as well.

MH: The issue of lagoon closure... once the new sewage treatment plant is commission, Iqaluit intends to pump the contents of the lagoon to the plant for treatment. The lagoon sludge will be allowed to dry, and then removed. The lagoon will be left empty for use as a back-up to the new plant.

We will need to carefully address the issues of dyke condition in the absence of liquid in the lagoon. And this is actually where we feel we should be spending our time, developing an operation and maintenance plan for the long-term use of that lagoon as an emergency storage centre, I guess. If dykes dry, the stability of them could be compromised, and that's exactly what we'd be looking at when we prepare our long-term plan next year.

Iqaluit will submit a formal plan for the conversion of the lagoon to a back-up facility, including maintenance plans, within six months of commissioning the new plant.

JT: In that regard, Mr. Chairman, members of the Board, the third condition that you see on Exhibit #6, under Conditions Applying to Waste Disposal into Water, is proposed as follows. The licensee shall submit to the Board within six months of the new plant becoming operational a plan for the conversion of the lagoon to a contingency back-up facility for short-term storage and treatment of sewage. The plan shall address long-term maintenance and inspection of the lagoon dykes. And that's to pick up exactly on what Mr. Hough has just mentioned to you.

Now, the last set of issues have to do with solid waste disposal. Before I ask Mr. Hough to speak to this issue, I wanted to address the Board on a couple of issue that have been raised by... in some of the intervention statements. And I think it's important that the Board recognise the limits of its jurisdiction in regard to waste management. Several of the parties have suggested to you that you have the ability to impose conditions regarding larger issues of waste management, and I simply wanted to remind you, at this point - and you know this, it was in you statement at the beginning of the hearing yesterday, Mr. Chairman - that the Board is given power to regulate the deposit of waste into water. It's not give the power to regulate waste management.

In most provinces in Canada, certainly the provinces that I'm familiar with, there is specific waste management legislation that deals with this, and it might be that there is a need for that in the Nunavut Territory, but at the moment it doesn't seem to exist, and it doesn't seem to exist at the federal level for Nunavut, and I would urge you not to simply expand your own jurisdiction to try to fill that gap. If there's a gap that should be addressed by the Legislature, then it should be addressed by the Legislature, or the federal government.

We have provided you, by way of documentation, with the solid waste management plan. We did that to provide the Board with evidence of the municipality's plans and planning process towards a new landfill, and a different type of landfill. But, having said that, I really don't believe that the Board has any jurisdiction to regulate a number of issues such as - and I'll list them for you - waste collection - I don't think you do - recycling, incineration, or hazardous waste management.

And in that regard, then, the municipality - and you'll hear in a moment Mr. Hough describe it - plans to construct a new incinerator, but I don't think the municipality would be applying to the Board for construction of the incinerator, because it doesn't have anything to do with the deposit of waste into water. In fact, I believe that application may have to be made to one of the regulatory agencies in the Nunavut Territory.

As a result of that, we are not going to be addressing... I'm not going to ask Mr. Hough even to speak to it. The request by Health and Social Services for a series of conditions dealing with... requiring a more detailed waste management plan from the municipality, from the municipality's perspective, you will by next year some time, hopefully, get an application to construct a new waste disposal site.

We're not going to address the comments made by both DSD and the three federal agencies requesting conditions about development of a hazardous waste plan, or hazardous waste conditions. And to the extent that the DSD's comments go to suggesting that the Board needs to impose conditions about recycling, we will make the... again, we think that's beyond what the Board has the power to do, and we won't be addressing it.

That - and I'm a little reluctant to get into this, because I know it was a subject of great discussion last year - I will be asking Mr. Hough to speak to the issue of open burning. I know that is a significant issue for the Board, and I know it's a significant issue for the community. However, I simply wanted to make it clear that, from our point of view - and I'm not sure the extent to which it was made clear to the Board last year - that we don't believe that the Board really has that much ability to control emissions into the air. And I again, without re-opening that whole discussion, simply wanted to say that. Having said that, I'm going to have Mr. Hough speak to that, and he's going to speak to burning at the site. And I guess, from our perspective, it's a necessary evil, and Mr. Hough can speak to how long that will go on, etc., and if people want to ask him questions, I guess they will ask him questions.

So, having said that, I will ask Mr. Hough to speak, first of all, to update the Board on the status of planning for new facilities for waste disposal.

MH: On the status of new facilities, in accordance with the solid waste management plan adopted by my municipal council, Iqaluit is proposing to establish an incinerator as a primary method of waste disposal, with a new landfill for the ash residue and the metal waste.

We are currently in the process of site selection and technology selection. Report on the site selection is due to us by Christmas. We will apply to the Board for approval to construct the new landfill once we have selected a site and developed the necessary reporting documents. We cannot agree to an arbitrary date for submission of that application as suggested by the federal departments.

JT: The second issue under waste management has to do with the contingency plan. Again, this was an issue that came up last year, members of the Board. There was, I think, a fair bit of discussion about what contingency would be in place when the current landfill is full. I'm going to ask Mr. Hough to speak to that issue, please.

MH: We expect the current landfill to be full by October of next year, even with continued burning. If a new incinerator or landfill is not ready, we will need to implement a contingency plan. Our current plan is to construct a small extension of the current site at the east end, and the use of berms to increase the height in necessary. We accept suggestions made by the Department of Sustainable Development and the federal departments that a detailed contingency plan be submitted, and we suggest a date of August 30.

Now, just a quick note on that. This is not a situation that any of us with the town wanted to be in. This is a very frustrating situation, and one that we're working very hard to overcome. Our primary objective, right now, and our goal, is to have our new incinerator in place at this time next year, so that we do not have to pursue the contingency plan that we will draw up.

The second to last condition that's on Exhibit #6, Mr. Chairman and members of the Board, is suggested as follows. If new solid waste disposal facilities will not be operational by the time that the landfill site is at capacity, the licensee shall submit to the Board by no later than August 31, 2001, a contingency plan for the interim period, and that's just to incorporate what Mr. Hough has just said.

The third issue under waste disposal has to do with operations of the current site, and I indicated that Mr. Hough would speak to that. Mr. Hough, could you do that, please?

MH: The municipality recognises concerns over open burning. The lack of disposal capacity makes it essential. Burning addresses other issues that have yet to be noted in a forum such as this. During the solid waste management plan, we found that the Department of Transportation had a rule of thumb limit for food waste landfills of three kilometres from the centre line of the runway. The current landfill site is within that three-kilometre zone. The reason Transport Canada has that rule is that food waste landfills attract birds. Bird strikes, for airlines, are incredibly dangerous.

Additional piling of food waste would increase the amount of leachate into the ground, and as everybody is very aware, our landfill site is not an engineered landfill. It's a dump.

So, with respect to the continuation of burning, it's a necessary evil at this point in time. Once again, it is not something that our council deems desirable. On many occasions, our councils have noted to us that this is a priority, and that should be stopped.

We do not have a current... sorry. We do have a current operation and maintenance plan for the landfill. It can be made available to the Board, if they wish. The Department of Health and Social Services has asked us to review it. We once again submit that we are pursuing other alternatives, in the incinerator and a new _____ considerably, and I hope you note, when we do our site visit today, and have also adjusted our operations to better fit... follow our operation and maintenance plan.

JT: The last issue we wanted to speak to is the issue...

[End of Tape 2 - Side A]

[Start of Tape 2 - Side B]

JT: ...within the responsibility, or under the responsibility of the municipality, and I would like to ask Mr. Hough to speak to that issue, please.

MH: Iqaluit is responsible for the closure of three sites, plus the existing site. We visited those last year. There's one in Apex and two adjacent to the current.

There are two other sites that are not the responsibility of Iqaluit. One is the responsibility of Transport Canada, and they are cleaning it up next summer. That site is a metal dump that borders on the Sylvia-Grenel(?) River, and it will see the clean-up of quite a number of old oil drums, vehicles and other metal waste, and the complete closure of that site next summer. We've very excited that Transport Canada has taken it upon themselves to come in and do this.

On another note, the site in the north 40 we still believe to be a federal government responsibility, and we hope that the federal government takes it upon themselves to do something about it.

We plan to remove all waste above ground and use earthworks to berm and cover the remaining site - that's on the Transport Canada site - and we can accept the suggestion of the federal departments that new closure plans for the waste sites for which the municipality is responsible be prepared and submitted to the Board, and we suggest a submission by December 31st, 2002 to give us time to deal with the many other priorities.

JT: And in that regard, Mr. Chairman and members of the Board, the last condition that you'll see we're proposing in Exhibit #6 is that the licensee shall, by no later than December 31, 2002, submit to the Board closure plans for all closed waste disposal sites for which it is responsible, and you've just heard Mr. Hough describe which those sites are, but just to recap, it's the current site, the two small sites adjacent to it, and the old Apex dump.

I think that was all we had to say by way of presentation. Thank-you.

TK: Thank-you very much Mr. Hough, and Mr. Tidball. Are there any questions to be addressed to the applicant from DIAND? Okay, would you like to take five minutes? Okay, we'll recess for five minutes or so.

[recess]

TK: Could we reconvene, please? Ladies and gentlemen, before we proceed, Mr. Bill Tilleman has a comment to make with regards to one of the Board members, Lootie Toomasie.

BT: Thank-you, Mr. Chairman. During the break, Mr. Toomasie felt quite sick, so he decided that for health reasons he needed to go lie down. We're not sure how long that... what that might mean, and hopefully he'll be back right immediately following the site visit, but if that does not take place, then we'll just update you as the day goes on, because the update will deal with whether or not he continues to participate on the panel, and if so, under what terms and conditions. For example, he'll need to hear the tapes and read the... we don't transcripts, but he'll have to listen to the tapes and read the exhibits. But the audience just should know that it was only for health reasons. He's very sorry that he had to leave, and we hope that he comes back soon. We'll provide updates as the day goes on.

Thank-you, Mr. Chairman.

TK: Thank-you, Mr. Tilleman. Mr. Webber, would you please proceed with your comments or questions?

LW: Thank-you, Mr. Chairman. Lee Webber, Department of Justice. What I'd like to propose is that the first round of questions come from the Department of the Environment rather than DIAND _____.

TK: By the way, apparently your mike is not working. [pause] Would you please repeat your comment?

LW: Yes, Lee Webber, Federal Department of Justice. I'd like to propose that the first round of questions come from the Department of the Environment, rather than from DIAND, if that's okay with the Board.

TK: Fine.

LW: Thank-you.

TK: Anne Wilson.

AW: It's Anne Wilson representing the Department of the Environment. Thank-you, Mr. Chairman. I have a few questions for the municipality, and I'd like to just start at the beginning of our intervention and cover the items in the order that you had presented them.

The first one is to do with the inspections on the Lake Geraldine dam. Would the engineering reports be available to the Board and to the interveners? I realise they aren't formal geotechnical reports, but that might be helpful in addressing our concerns.

TK: Okay, before we proceed, I would like to remind all of you that all questions shall be directed to the Chairman. Please proceed.

MH: Thank-you, Mr. Chair. Matthew Hough. Thank-you, Mr. Chair. Yes, those reports can be made available, the inspection reports. The consultant is OMM Trault(?) out of Ottawa.

Just a quick query, Mr. Chair. When we are giving answers to the interveners' questions, are we able to quickly spout off one?

My question was that when we are giving answers to the interveners, are we able to quickly reiterate a point that we made in our submission?

Okay, yes, those reports are available, if the Board so deems that they would wish to see them. But I would like to reiterate that having reviewed DIAND's '99 submissions, we still see no discussion as to why DIAND is concerned, and we would like to know that.

AW: Mr. Chairman, Anne Wilson, here. Can we defer that question until DIAND is up to ask their questions?

Thank-you, Mr. Chairman. Anne Wilson, again. My next question is to do with the sewage lagoon dykes, and I appreciated the explanation provided by Mr. Hough on

the 1997 incident that led to the concerns for the dyke, and my question is, did the effluent going through the dyke while the toe was blocked with snow and ice compromise the structure of the upper part of the dyke, and was that checked by an engineer?

MH: Thank-you, Mr. Chair. Yes, it was checked by an engineer. It was done by Ferguson Simmet(?) Clark. Those reports indicate that there was no adverse damage to the lagoon dykes. The recommendation was that we lower the level in the lagoon, that we monitor on a daily basis, and that we ensure that there is not an excessive build-up of snow and ice at the toe.

AW: Thank-you. Anne Wilson again. One question that came to mind was, how does the lowered freeboard affect the retention time? You'd said that currently it's 6.1 days, and what reduction did that result in?

MH: Thank-you, Mr. Chair. Matthew Hough again. The effect on the retention time didn't bring it down lower than 6.1. The report also shows that it lowered the retention time from 8 days to 6 days, 6.18 days was the figure that was indicated in the report. So, it didn't adversely affect the retention time or put in anywhere near the four-day minimum that our lagoon is designed to handle.

AW: Thank-you. Anne Wilson again. Just to comment that a 25% reduction in retention would effect the treatment of the effluent, just for their concerns for effluent quality.

I'll just move on to my next question, Mr. Chairman. With respect to the commissioning of the new sewage treatment plant, and the management of sludge that that generates, our intervention - our joint intervention - requested a sludge management plan be made prior to implementation. Is the municipality willing to provide a short-term sludge management plan prior to implementation? And then, as they have requested in Exhibit #6, subsequently do the long-term management plan?

MH: Thank-you, Mr. Chair. I think we've already addressed that in our submission. Not only the short-term sludge management plan with the placement of sludge on HDP liner at the solid waste site, but also our submission that we will draw up a long-term sludge management plan.

AW: Thank-you. Anne Wilson again. I guess my real question is, are you going to formalise this in a plan which will be submitted for approval as requested in our intervention?

MH: Mr. Chair, in response to the question, we honestly didn't think it was a necessity to outline something that we had already discussed, and once again detailed today. Now I'll speak for the one that would probably have to write such a thing, that it would be a very simple one-pager, if that's what Environment Canada is looking for.

AW: Thank-you, Mr. Chair. Anne Wilson again. If that provides enough detail, that would certainly be helpful.

My next question is to do with solid waste disposal, and I understand that the municipality has definitely chosen the option of incineration, and that, in my mind, was what we were looking for in the request to submit a final proposal, was to identify definitively the option which has been selected. So, that was that was getting at. Can you describe for me the types of technology for incineration that you're investigating?

MH: Mr. Chair, thank-you. Matthew Hough again. In answer to the question, no, we are currently in the process of site selection and technology selection, and it would be... I would mistaken if I was to circumvent that process by bringing to the table today an discussion that hasn't gone through our solid waste management committee or our counsel.

AW: Thank-you, Mr. Chairman. Anne Wilson. Just to comment that we'll look forward to seeing the options... I hope to see the options that you'll be pursuing. I think this will be a great improvement on current practices.

With respect to hazardous materials, I have a great concern that this is not going to be formally addressed, and I have to disagree with the town's submission that this does not fall within the purview of the protection of the water environment. I think that anything currently entering the landfill definitely has the potential to migrate and enter surface waters, and the management of hazardous materials should be an important aspect of the town's waste management. And I believe this is the proper forum to address it at.

MH: Mr. Chair. Actually, no, we don't have anything to respond in answer to that question. I think Mr. Tidball's submission during our intervention stands, and the discussion of our opinions on the jurisdiction over hazardous waste.

AW: Anne Wilson, again. With respect to the town's operation and maintenance plan, the last approval we've aware of is in March, 1995. I was just wondering if there has been a subsequent that has been approved by the Board that I'm not aware of.

MH: Mr. Chair, Matthew Hough again. No, there isn't.

AW: Okay, and again on the issue of planning - Anne Wilson speaking - with respect to spill contingency planning there were no comments from the town on the status of that plan. Could I ask where it's at?

JT: Mr. Chair _____ address that sort of at the end. I think the joint submission of the three federal departments suggested that the current condition, which requires a re-

submission within three months of approval, was something that we were in agreement with, so we didn't even address it. So, we're fine with that suggestion.

AW: Anne Wilson again. Thank-you very much. That is all the questions I have at this time.

LW: ...Justice Canada. Thank-you, Mr. Chairman. Mr. Hough, first of all, the lagoon dykes... a statement has been made today, and a statement was made in the town's documentation that no problems with the stability or integrity of the dykes have been observed, have been noted. Now, perhaps we can deal with the period since the breach of the dyke in 1997. In that period of roughly three years, what inspections of the dyke have been carried out?

Sorry, I've been corrected. It wasn't a breach. I gather there was what we might call an incident.

MH: Thank-you, Mr. Chair, Matthew Hough again. I think it's very dangerous to refer to it as a breach, or even an incident. It was seepage through the actual dykes themselves. The inspection done by Ferguson Simmet Clark was throughout the latter part of 1997. The report was actually submitted early in 1998. Since then, we have continued to follow their advice, advice of continued monitoring on a daily basis, ensuring there is no freeze-up at the toe of the sewage lagoon dyke, and the spillway has actually been doing its job very well. I noted the spillway in my submission, and that spillway was actually lapped at - that's a way to describe it - when we had a period of heaving rainfall in the summer. It worked as it should. It released the surface water at a very, very little amount, and we were able to quickly get down there, lower the level of the dam, and it was taken care of.

LW: Lee Webber. You've just referred to monitoring. Who has been doing the monitoring, and with what frequency?

MH: Thank-you, Mr. Chair. Matthew Hough again. Our monitoring is done on a daily basis by our utilidor(?) crew, and our utilidor crew comprised of qualified water treatment and waste water treatment operators, and they do that on a daily basis.

LW: Thank-you, Mr. Chair. Lee Webber. Mr. Hough, does the utilidor crew include any engineers?

MH: Thank-you, Mr. Chair. No, it would be very rare to have an engineer on a utilidor crew. However, I can submit that they are very well-qualified in their trade as water and waste water operators.

LW: Could you give a description of what it is that a waste water operator's trade consists of, and to what extent it includes inspection of lagoon dams?

MH: Sure. All of our utilidor crew have taken the introductory course for water and waste water treatment. We have that... four out of the five have Level 1 of the water and waste

water treatment course, and our utilidor foreman is challenging the Level 2 this very week in Yellowknife.

It consists of courses on the basics of water and waste water treatment, both in treatment plants and in lagoons. It involves the maintenance of water treatment plants and waste water treatment facilities, and as far as inspections are concerned, they are fully-briefed in inspection needs and approaches.

TK: I would like to remind you all that.. always state your name for the record, please.

LW: Lee Webber, again. Mr. Hough, I wonder if you could clarify for us something about the closure plans, and this may purely be a point of clarification. The town is proposing to have closure plans for which dump sites by when? And when I say which dump sites, I'm encompassing both the current dump site and any former dump sites. Which sites have closure plans or will have closure plans, and by when?

MH: Thank-you, Mr. Chair. Matthew Hough again. Once again, in our submission we spoke of three old sites, and the present site. There is one dump site in Apex, there are two adjacent to the current landfill site, and the present site. And once again, we suggested a date of December 31st, 2001... or, 2 - 2002, sorry - to give us time to deal with many of the other priorities that we have.

LW: That date of December 31st, 2002, that's for the old ones, or the old ones and the current one?

MH: That's for everything. Mr. Chair, Matthew Hough again.

LW: So, there is currently no - Lee Webber - there is currently no closure plan for the current site, and you don't propose to have a closure plan for the current site until the end of 2002.

MH: Thank-you, Mr. Chair. No, there isn't, and no, we don't.

LW: Thank-you.

Lee Webber. The existing lagoon and its sludge, do you know how deep the sludge layer is?

MH: Thank-you, Mr. Chair. Matthew Hough. No, I don't. No, we don't, and we will not know until the sewage lagoon is drained.

LW: Lee Webber. Is it possible that the sludge in the lagoon... let me frame this question a little more comprehensively, I hope. The plan to drain the lagoon, leaving only the solid component, the sludge, and then to have the sludge dry. Is that correct?

MH: Thank-you, Mr. Chair. Yes, it is. Matthew Hough again.

LW: Lee Webber. Is it possible that the sludge will not dry within a single summer season?

MH: Thank-you, Mr. Chair, Matthew Hough again. Yes, it is.

LW: Excuse me just a second, Mr. Chair.

Lee Webber again. Okay, let's say that at the end of the summer season, the sludge has not dried completely, and then we're into another winter. How do you propose to remove the sludge if it hasn't dried completely, and where would you remove it to?

MH: Thank-you, Mr. Chair. We won't. We'll fence it and we'll leave it. That was Matthew Hough again, by the way.

LW: Mr. Chairman. Lee Webber, again. I apologise for the delays. Mr. Smith is giving me technical assistance, so it takes us a little bit of time to get our signals in order. Those are our questions for the moment. Thank-you.

TK: Thank-you very much.

JG: Thank-you, Mr. Chairman. My name is Jordan (DeGroot?). I'm here on behalf of DFO Habitat Management. Our concerns - DFO's Habitat Management's concerns - are with respect to deposit of waste into water. Under Section 36 of *The Fisheries Act*, we share responsibility for this with Environment Canada. However, Environment Canada takes the lead. We are keenly interested in improving effluent quality in Kudusee(?) Inlet as soon as possible.

My question to the town is with respect to the commissioning of the new sewage treatment plant. The town seem reluctant to commit to a date on this aspect of their waste management plan, and I want to know why the town is reluctant to commit to a date when, in their own admission of evidence, they suggest that they are going to have the new sewage treatment plant up and running by spring of 2000?

MH: Thank-you, Mr. Chair. That's a fair question. The reason we're not willing to commit to a date is very simple. The complexities of the repair to the plant are such that if we commit to a date, we may not meet it. I think it's fair to say - and everybody will see, on the tour today - the difficulties we are facing in the repair of the tanks. It's not a grout-and-patch job. It's a very complex job-creating program that we are endeavouring to pursue, and it's something that we have never done before, and we are taking very carefully so that we get it right.

That was Matthew Hough that just spoke. Sorry, Mr. _____.

JG: Thank-you, Mr. Chairman.

TK: Thank-you. Any questions from... Mr. Marcel to the applicant.

MM: Good morning, Mr. Chairman. Thank-you. My name is Marcel Mason m-a-r-c-e-l m-a-s-o-n, I guess I represent me, as opposed to another department or agency.

My question is regarding... my questions are regarding the sewage lagoon dykes or dams. What types of material or waste are they designed to filter?

MH: Thank-you, Mr. Chair. I'd love to be able to give a very technical answer to that. To do that I could bring back, basically, a list of what that lagoon dyke does later in the day, if it's sought after by the Board. The dykes lower the... the dykes improve the effluent quality, is the very simple way to put it. As I say, I'm not going to get into a technical answer to that, but if the Board so desires I would bring that back later.

MM: Marcel Mason again. Mr. Chairman, I would be satisfied with a general type of answer. Chemical, organic?

MH: Once again, Mr. Chair, I'd be a lot more comfortable just pulling my books on that and coming back later in the day to give a proper answer. If I was to get into it now, I'd likely get it wrong.

MM: Marcel Mason again. The town mentioned that this summer, during a period of heavy rain, the surface water was released by a type of mechanism, and then the level of the lagoon was quickly lowered in order to prevent problems with the dams...

[End of Tape 2]