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MACKENZIE VALLEY LAND AND WATER BOARD

PUBLIC HEARING

CITY OF YELLOWKNIFE

TYPE A WATER LICENCE APPLICATION FOR CITY OF YELLOWKNIFE

Board Members:

Chairman	Willard Hagen
Member	Floyd Adlem
Member	Pat Laroque
Member	Elizabeth Biscaye

HELD AT:

Yellowknife, NT  
January 19, 2010  
Day 1 of 1

APPEARANCES

1  
2  
3 Lynn Carter ) MVLWB  
4 Jamie Vangulck )  
5 Joe Murdock )  
6 Anne Umpleby )  
7 Zabey Nevitt )  
8 Jennifer Bayly-Atkin ) Board Counsel  
9  
10 Dennis Kefalas ) City of Yellowknife  
11 Wendy Alexander )  
12 Chris Greencorn )  
13  
14 Robert Jenkins ) INAC  
15 Catherine Mallet )  
16 Scott Stewart )  
17  
18 Danielle De Fields ) North Slave Metis Alliance  
19 Brittany Shuwera )  
20 Sheryl Grieve )  
21  
22 Anne Wilson ) Environment Canada  
23 Jane FitzGerald )  
24  
25

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APPEARANCES (CONT'D)

Gerald Enns ) ENR  
Diep Duong )  
Aileen Stevens )

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1 --- Upon commencing at 1:11 p.m.

2

3 THE CHAIRPERSON: Good afternoon to  
4 everyone present. As tradition, I guess we're going to  
5 have the meeting opening with an opening prayer. And,  
6 Sabet, will you lead us in that? Thank you.

7

8 (OPENING PRAYER)

9

10 THE CHAIRPERSON: So good afternoon. And  
11 this Hearing is for the City of Yellowknife water licence  
12 renewal application for a Type A water licence. My name  
13 is Wildred Hagen and I'm the Chair of the Mackenzie  
14 Valley Land and Water Board.

15 The Mackenzie Valley Land and Water Board  
16 was established under Part 4 of the Mackenzie Valley  
17 Resource Management Act, in March of 2000. We exercise  
18 authority over land and water permitting -- that should  
19 be land use permitting and water licensing in the  
20 Mackenzie Valley under the MVRMA and the Northwest  
21 Territories Waters Acts, respectfully.

22 This panel, which is responsible for  
23 issuing water licences and land use permits outside of  
24 the settle -- land claim areas, was established in  
25 accordance with section 99 of the MVRMA in April, 2000.

1 Upon being established, the Mackenzie Valley Land and  
2 Water Board took over responsibility for land use  
3 permitting from the Department of Indian Affairs and  
4 Northern Development and Water Licensing from the NWT  
5 Water Board as required by the MVRMA.

6 Over the next two (2) days the Mackenzie  
7 Valley Land and Water Board will conduct a hearing into  
8 an application for a Type A water licence renewal under  
9 the NWT Waters Act and the MVRMA as filed by the City of  
10 Yellowknife.

11 This Hearing has been constituted under  
12 paragraph 21(2)(a) of the NWT Waters Act and under  
13 Section 24 of the Mackenzie Valley Resource Management  
14 Act.

15 The application for the water licence and  
16 the land use permit were deemed complete on July 20th,  
17 2009. The application and supporting material were then  
18 circulated to reviewers.

19 This Hearing was advertised in accordance  
20 with subsection 23(2) of the NWT's Waters Act. Public  
21 notices were listed in The News/North on November 23rd,  
22 2009, and in The Yellowknifer on January 13th, 2010.  
23 Announcements were also made on CBC and CKLB Radio.

24 The Board staff held a technical session  
25 in Yellowknife on November 12th, 2009. Board staff also



1 held a pre-hearing conference on December 15th, 2009.  
2 The pre-hearing conference identified the procedures to  
3 be followed at this hearing. There were no new legal  
4 issues raised at the prehearing conference.

5 The parties were instructed to file their  
6 hearing submissions on November 27th, 2009. The City of  
7 Yellowknife responded on January 7th, 2010, to these  
8 interventions. All parties were required to submit their  
9 presentations by January 12th, 2010.

10 Today, we'll sit from 1:00, a little after  
11 1:00 now, to 5:00, with a break for coffee mid-afternoon.  
12 Tonight there's a public session scheduled to be held  
13 here from 7:00 to 9:00 p.m.

14 If necessary, we will begin again tomorrow  
15 morning at 9:00 a.m. and sit until the hearing is  
16 complete, with breaks for coffee and lunch.

17 The Board asks for your cooperation in  
18 being prepared to make your presentations in the order  
19 set out in the agenda, to be organized and focussed in  
20 your questioning of other parties.

21 There are a few housekeeping items.  
22 First, the washrooms. They're through the door and to  
23 the left. Two (2) emergency exits. And just a reminder,  
24 if you could turn off your cell phones or put them on  
25 vibrate it would be much appreciated.

1                   So, as mentioned, the hearing has been  
2 scheduled for two (2) days but the presentations are  
3 concluded prior to 5:00 p.m. tonight. We may ask that  
4 the Proponent and Intervenors present their closing  
5 statements after our public session tonight. This will  
6 allow us to adjourn the hearing today and not reconvene  
7 tomorrow.

8                   The order of proceedings will be as  
9 follows: The Board will, first of all, hear from the  
10 City of Yellowknife regarding their application before  
11 the Board. Once they've completed their presentation the  
12 order of questions will be as follows: Registered  
13 Intervenors, registered speakers, the general public and  
14 then the Board consultants, Board staff, or legal  
15 counsel. Board members will have the last opportunity to  
16 ask questions.

17                   For the purpose of hearing questions from  
18 the public, there is a roving microphone that will be  
19 brought to you for your questions. If you wish to speak,  
20 please stand up and identify yourself to Anne and she  
21 will bring the mic forward to you.

22                   When questions are directed at the  
23 Applicant, when they're completed we will proceed to  
24 presentations from the Intervenors who have registered:  
25 Environment Canada, Government of Northwest Territories,

1 Environment and Natural Resources, Indian and North  
2 Affairs Canada, and the North Slave Metis Alliance.

3           There will be an opportunity for questions  
4 after each presentation and the order for these questions  
5 will be as previously set out: Registered Intervenors,  
6 registered speakers, the general public, Board  
7 consultants or Board staff or counsel, and finally Board  
8 members. Those members of the public who have registered  
9 here today at this afternoon session will also be given  
10 an opportunity to address the Board after all the  
11 registered Intervenors have done so.

12           The Board wants this hearing to be as  
13 informal as possible. However, as a quasi-judicial body,  
14 we are bound by rules of procedural fairness, and as  
15 Chair, I am responsible for the conduct of this hearing  
16 and I would like -- would ask that all comments and any  
17 requests to be address through the Chair and I will most  
18 definitely remind you if that's not done.

19           Once everyone has the opportunity to  
20 speak, the registered Intervenors, and then the  
21 applicant, will have an opportunity to present closing  
22 comments.

23           So I'd like to take a few moments to  
24 introduce the members of our Board and our staff,  
25 starting with Sabet and Floyd Adlem, I guess. I'm sorry,

1 I had the -- I guess you switched chairs on me here, and  
2 here you're supposed to be there -- and Pat Laroque. And  
3 over at these tables over here we have our Executive  
4 Director, Zabey Nevitt; and Anne Umpleby as our  
5 Regulatory Manager; Lynn Carter, who is a -- is a file  
6 assist, as our Regulatory Officer and this is her -- been  
7 her file; Jennifer Bayly-Atkin, is our Board Legal  
8 Counsel; and Jamie Vangulck is our Technical Consultant;  
9 and Amanda is -- I don't believe is here but Brenda is  
10 over in the corner over there, our Administrative  
11 Manager; and Margaret Mackenzie is providing  
12 interpretation in the Dogrib language for us today.

13 So I'd like to make note that these  
14 proceedings are being recorded and will be transcribed  
15 later. Therefore, we ask that when you speak you please  
16 precede your presentation with your name and who you  
17 represent.

18 Our Court Reporter is Ms. Wendy Warnock.  
19 If you have any questions about the transcripts, please  
20 direct them to -- to Wendy at one of the breaks.  
21 Transcripts will be available on our website at a later  
22 date. But also please be mindful that we have  
23 interpreters and that these proceedings are being  
24 interpreted so when speaking or presenting, please pace  
25 yourself accordingly.

1                   We will proceed with presentations and  
2 questions as indicated in the agenda. We will begin with  
3 the City of Yellowknife, followed by Environment Canada,  
4 GNWT, ENR, Indian and Northern Affairs, and the North  
5 Slave Metis Alliance and registered speakers.

6                   Before we begin with the presentation by  
7 the applicant I would like to call for appearances.  
8 Would the counsel or the spokesperson for the City of  
9 Yellowknife please identify themselves for the record?

10                   MR. DENNIS KEFALAS: Dennis Kefalas,  
11 Director of Public Works for the City of Yellowknife. To  
12 my left is Wendy Alexander, one of our Works engineers,  
13 and to her left is Chris Greencorn, our Manager of Public  
14 Works and Engineering.

15                   THE CHAIRPERSON: Okay, thank you. Would  
16 the counsel or spokesperson for the Registered  
17 Intervenors please identify themselves for the record?  
18 That is the Registered Intervenors.

19

20   (BRIEF PAUSE)

21

22                   MS. ANNE WILSON: Anne Wilson for  
23 Environment Canada.

24                   THE CHAIRPERSON: Okay, thank you. For  
25 NWT-ENR?

1 MS. AILEEN STEVENS: Hi, Aileen Stevens.  
2 I'm the air -- air quality programs coordinator from  
3 Environment and Natural Resources. To my right is Diep  
4 Duong, she's our waste specialist, and Gerald Enns,  
5 further to the right, is our hazardous waste specialist.

6 THE CHAIRPERSON: Thank you. And Indian  
7 and Northern Affairs Canada?

8

9 (BRIEF PAUSE)

10

11 MR. ROBERT JENKINS: Hi. It's Robert  
12 Jenkins. I'm with INAC. I got Jeanne Arsenault and  
13 Catherine Mallet from the Water Resource Division, as  
14 well as Scott Stewart, water resource officer with the  
15 South Mackenzie District.

16 THE CHAIRPERSON: Okay, thank you. And  
17 from the North Slave Metis Alliance.

18 MS. DANIELLE DE FIELDS: Danielle De  
19 Fields, North Slave Metis Alliance. To my left is  
20 Brittany Shuwera with the North Slave Metis Alliance, and  
21 we'll be joined by Sheryl Grieve later.

22 THE CHAIRPERSON: Okay, thank you all for  
23 that. And now we'll turn it over to the City of  
24 Yellowknife for their presentation.

25

1 OPENING STATEMENT BY CITY OF YELLOWKNIFE:

2 MR. DENNIS KEFALAS: Thank you, Mr.  
3 Chair. Just to start, I'd like to thank the Board for  
4 the opportunity to present our application. As well, the  
5 City's mandate is to provide essential service --  
6 services in the most cost-effective manner. As well, the  
7 City's always looking to improve the services that we do  
8 provide. To date, the City has been extremely pleased  
9 with the cooperation that we've experienced with the pre-  
10 hearing meetings and the technical session.

11

12 (BRIEF PAUSE)

13

14 THE CHAIRPERSON: We got ahead our self  
15 here slightly. We're looking for Intervenor opening  
16 statements starting with Environment Canada.

17

18 OPENING STATEMENT BY ENVIRONMENT CANADA:

19 MS. ANNE WILSON: Okay, thank you, Mr.  
20 Chairman. I should have introduced my colleague, Jane  
21 Fitzgerald, who is sitting next to me, as well. I'll go  
22 to the opening comments.

23 Environment Canada is very pleased to  
24 participate in this Hearing for the renewal of the City  
25 of Yellowknife's water licence. And we'd like to

1 acknowledge that over the past licence term the City has  
2 shown leadership in environmental matters and  
3 demonstrated an environmental conscience.

4                   And as the City continues to grow, it's  
5 going to be important to continue pursuing best practices  
6 in all municipal operations. To that end, Environment  
7 Canada will be bringing forward our recommendations with  
8 respect to the licenced activities, specifically around  
9 wastewater and waste management, for the Board's  
10 consideration.

11                   It's a priority to enhance environmental  
12 protection and we look forward to continue working with  
13 the City and the Board through this hearing process and  
14 onward.

15                   THE CHAIRPERSON:    Okay, thanks Anne.  
16 We'll have opening statements from GNWT-ENR.

17

18                   OPENING STATEMENTS BY GNWT-ENR:

19                   MS. AILEEN STEVENS:    Thanks. We'd just  
20 like to acknowledge that we've had some excellent  
21 cooperation working with the City of Yellowknife and we  
22 look forward to continuing this relationship as we  
23 proceed through the licensing. Thanks.

24                   Oh, pardon me, Aileen Stevens with ENR.

25                   THE CHAIRPERSON:    Okay, thank you.



1 Indian and Northern Affairs Canada.

2

3 OPENING STATEMENT BY INDIAN AND NORTHERN AFFAIRS CANADA:

4 MR. ROBERT JENKINS: Thank you, Mr.  
5 Chair. It's Robert Jenkins with INAC. I don't have  
6 extensive opening remarks, just look forward to  
7 presenting to the Board and having a productive public  
8 hearing.

9 THE CHAIRPERSON: Okay, thank you. And  
10 the North Slave Metis Alliance opening remarks.

11

12 OPENING STATEMENT BY NORTH SLAVE METIS ALLIANCE:

13 MS. DANIELLE DE FIELDS: Good afternoon.  
14 We haven't prepared opening comments, but Sheryl will  
15 speak later this afternoon. Thank you. Danielle De  
16 Fields.

17 THE CHAIRPERSON: Okay, thanks. I guess  
18 I should remind everyone again to identify themselves and  
19 who they're with before they speak. And my apologies for  
20 jumping the gun there. You now have the floor. Thank  
21 you.

22

23 PRESENTATION BY CITY OF YELLOWKNIFE:

24 MR. DENNIS KEFALAS: Thank you, Mr.  
25 Chair. It's Dennis Kefalas, the City of Yellowknife.

1 Essentially, it's come to pass that we've had our water -  
2 - water licence up for renewal once again.

3 I think over the last eight (8) years  
4 we've pretty much answered and -- and fulfilled most of  
5 the requirements of our past water licence. This is a  
6 brief outline of what we'll try and present to both the  
7 Board and the members at large to indicate --

8 Is that better? So essentially what we'll  
9 start off is with our water requirements and how we deal  
10 with water and how we distribute water throughout the  
11 City, sewage disposal, solid waste, storm water, and  
12 additional water licence amendments that we're seeking at  
13 this time.

14 Where does our water come from?  
15 Essentially -- originally Yellowknife used to draw water  
16 from Yellowknife Bay. Concerns came about regarding  
17 arsenic concentrations within the Bay water, so during  
18 the ear -- late sixties the City actually installed a 8  
19 kilometre pipeline to the mouth of the Yellowknife River  
20 where it established a pumphouse. That water is pumped  
21 through the submerged pump line to Pumphouse Number 1.

22 As we can see through this map, throughout  
23 the City we have four main pumphouses, including one on -  
24 - on the Yellowknife River, Number 2. We also have two  
25 research stations to ensure that the water is circulated

1 and heated. Both requirements to help us with our freeze  
2 protection as we try and ensure that we provide clean  
3 potable drinking water to our residents. This is  
4 something that's not done throughout other jurisdictions  
5 in terms of the cold climate, but is requirements that we  
6 have to maintain to ensure that we can continue to  
7 provide our service.

8           Since our last water licence, we have  
9 installed a new pumphouse, Number 6, which is located  
10 right here, as part of our new subdivision in the Niven  
11 Lake areas. This station will ensure that we can provide  
12 essential water flows throughout this area, as well as  
13 ensuring circulation is maintained so that our -- our  
14 distribution system doesn't freeze.

15           Essentially, all of -- given the quality  
16 of our water, all essentially the City does to -- to date  
17 is -- is disinfect water by -- through chlor --  
18 chlorination. Over the years we've also established a  
19 need to provide dental health -- or improve dental  
20 health, so we've started fluoridating our water sev --  
21 many years ago and we continue to do so. Essentially, we  
22 try and monitor all our systems electronically through  
23 Pumphouse Number 1, through our SCADA system, to ensure  
24 that we can -- so we can ensure that our services are  
25 provided seven (7) -- you know, seven (7) -- twenty-four

1 (24) hours a day, seven (7) days a week.

2                   The City in 2008 used almost 3 million  
3 cubic metres of water. This essentially works out to be  
4 400 litres per person, per day, which is down  
5 significantly from a time in the early '90s when there  
6 was a lot of wastage in the water, where we were up to  
7 720 litres per capita per day. At that time, the City  
8 determined that a water conservation program was needed,  
9 so we established a leak detention system and tried to  
10 mandate that all non-essential system bleeders were  
11 eliminated. And as you can see through the next graph,  
12 over the years we've actually drastically reduced our  
13 consumption, or actually, water wastage.

14                   To say upfront the water -- the City is  
15 actually in a -- in the business of selling water and  
16 that's how we can ensure that our services are maintained  
17 and that we can develop enough reserves to replace aging  
18 infrastructure. And we -- right now we have a program,  
19 which is a continued program, to help replace some of our  
20 older infrastructure, which is somewhat, I guess it's  
21 something a lot of the communities within Canada haven't  
22 done, and are dealing with major problems now with aging  
23 infrastructure. The City mandates -- or actually, part  
24 of our mandate to spend between 2 1/2 to 3 1/3 million  
25 dollars a year on capital projects to help replace this

1 infrastructure.

2                   Futur -- future water usage. As part of  
3 the new Drink and Water Guidelines, we'll be mandated to  
4 actually provide some sort of filtration of our water  
5 source, given that it is a surface water body. The City  
6 is just -- actually, we've just finished reviewing and  
7 evaluating our proposals for the engineering and design  
8 of this new water treatment plant and we'll be awarding a  
9 contact within the very near future.

10                   The plant should be able to meet the  
11 waters in the -- the City's water needs for at least the  
12 next twenty (20) years, and just, within the last few  
13 years, we've actually expanded our reservoir to address  
14 the need for at least ten (10) to fifteen (15) years.

15                   Our raw water is extremely good quality.  
16 The City continues to upgrade our water infrastructure as  
17 I indicated; part of this also looking through all our  
18 pumphouses to ensure that the pipings is in good working  
19 order, and annual testing to ensure that we can meet the  
20 needs and continue operating as we have in the past.

21                   Where does our sewage go? Well,  
22 essentially, we have a collection system that's  
23 distributed through several lift stations throughout the  
24 City. Eventually it goes to our main -- major lift  
25 station, Number 5, which pumps the sewage through a -- I

1 think it's a 3 kilometre force main to Fiddler's sewage  
2 lagoon. Certain areas of the City we are -- provided  
3 with truck services.

4                   So, again, throughout the Cam Lake area  
5 and most of old town we end up trucking sewage to one of  
6 our lift stations, and then it's being piped to the  
7 sewage lagoon. We also have about within ten (10) to  
8 fourteen (14) units within the City that are still using  
9 honey bags as a means to dispose of their sewage. As  
10 such, we've maintained the honey bag pit out of the  
11 Fiddler's Lagoon where we deposit our -- our collected  
12 honey bags.

13                   The City, within -- hopefully within the  
14 next year, we're going to try and eliminate this service  
15 by providing other means to these individuals, through  
16 either chemical toilets or composting toilets, to  
17 eliminate -- it's pretty in -- un -- it's not a very  
18 essential service on our part. We spent quite a bit of  
19 money to provide a service to, you know, ten (10) to  
20 fourteen (14) individuals throughout the town. So what  
21 we're going to try and do in the future is provide with a  
22 -- a more appropriate means of disposing of their sewage.

23                   Just going back, here -- here's a map  
24 indicating where our lift stations are. Since our last  
25 submission we've constructed two (2) additional lift

1 stations to service the Niven subdivision area, both ten  
2 (10) and eleven (11). These are minor lift stations;  
3 will help carry sewage and -- and pump it to our gravity  
4 system that makes its way to the lagoon.

5                 Sewage treatment. Essentially we use a  
6 means of a lagoon system to treat our sewage; so, use  
7 natural, I guess, processes in terms of dispose of  
8 sewage. This is an appropriate way to treat -- or to  
9 treat sewage and is used throughout Canada, especially in  
10 northern climates where it's extremely hard to find -- or  
11 to fund major mechanical systems.

12                To date we meet all the -- all of our  
13 requirements within the existing water licence. And in  
14 the future, given a new CCME standards that sho -- will  
15 be adopted, we should be able to meet those requirement  
16 without any major significant work, in terms of building  
17 any additional and actual mechanical sewage treatment  
18 tant -- plant for the thirty (30) to forty (40) years.

19                Again here is our system. You'll see,  
20 here's the City itself appears, here's the force main  
21 making it into the lagoon. We decant late in the year.  
22 We usually start in September -- September/October, at  
23 which time it's a six (6) to eight (8) week process, as  
24 it decants it makes its way through a chain of lakes and  
25 ponds and eventually makes its way to Great Slave Lake.

1 To date we've always been in -- we've met all of our  
2 mandate in terms of meeting the different levels of  
3 treatment.

4 Sewage capacity. Essentially the lagoon  
5 is -- reaches a maximum potential at seven and half (7  
6 1/2) months, with a minimum reten -- sorry, has a minimum  
7 retention of seven and a half (7 1/2) months. We  
8 currently have a retention policy of nine (9) months, and  
9 the decant period, as I said earlier, of two (2) months.

10 As sewage production increases the  
11 retention time will decrease. However, through the  
12 elimination system bleeders we've found that we've been  
13 able to maximize the capacity -- or the existing capacity  
14 of our lagoon. And while in the past we've had some --  
15 some years where we've actually had overflows, more  
16 attributed to the heavy stormwater runoff or snow melt,  
17 we've actually, in a -- in most cases have maintained our  
18 design requirements, in terms of providing retention for  
19 seven and a half (7 1/2) months. It's anticipated  
20 effluent will still meet the revised water licence  
21 criteria for the new water licence.

22 Water licence amendments. In terms of tox  
23 -- toxicity we want to reduce the percentage of  
24 survivable organisms from 100 percent to somewhere  
25 between what the CCME guidelines have indicated, 50



1 percent, for mortality rate and what we've achieved in  
2 the past. To date we've passed all the mortality rates  
3 at a -- at a hundred percent, so this should not be a  
4 problem.

5                   And this is something that we will be  
6 working out with the -- the various Intervenors to come  
7 up with a -- I guess -- I guess -- anyways, now that I'm  
8 drawing a blank. I guess that's not great. But,  
9 anyways, a rate that we both can agree to in terms of the  
10 Intervenors and the City. And right now we're looking at  
11 70 percent, however, it's not set in stone and if one of  
12 the other Intervenors wishes, we can talk about it in  
13 greater detail before the water licence is actually  
14 issued. Again, we're looking to sampling be reduced to  
15 twice a year: once during the spring freshet and once  
16 during the decant.

17                   Ammonia. The current licence requirement  
18 required a plan be put into place to reduce ammonia  
19 concentrations to an average of 5 milligrams per litre  
20 for total ammonia, a maximum grab sample of 10 milligrams  
21 per litre. As ammonia tox -- toxicity dependant on water  
22 temperature and pH, higher levels of ammonia are not  
23 necessarily toxic.

24                   As you can see by the graph there is an  
25 area that we can fall within to ensure that we're not

1 toxic. And at this time we'll be looking at following  
2 something in this general parameters in or -- to be  
3 included as part of the -- the water licence -- or the  
4 new water licence.

5           Ammonia. Anyways, again, recommended  
6 objectives, 5 milligrams average total concentration, 10  
7 milligrams maximum grab sample concentration. So  
8 recommended criteria is effluent is nontoxic, with  
9 regards to ammonia and pH. And this will allow us for  
10 higher ammonia concentration and lower pH levels, which  
11 is the existing situation.

12           Again, another thing that's outstanding  
13 will be phosphorus. The current licence required a plan  
14 to be put into place to reduce phosphorus concentrations  
15 to an average of 1 milligram for total phosphorus and 2  
16 milligrams for a grab sample. As phosphorus is a site  
17 specific concern, the City reco -- recommends performing  
18 a full year effluent characterization, following which  
19 phosphorus concentration levels will be determined. So  
20 we're hoping to do that within the next -- by 2011.

21           So summary: The existing lagoon is able  
22 to produce an effluent that meets the CCME wastewater  
23 strategy guidelines. Changed to the toxicity tested in  
24 ammonia and phosphorus concentration requirements will  
25 bring effluent quality in line with the CCME guidelines.



1 all the waste that's brought into the bailing facilities,  
2 in terms of solid waste, not construction waste, baled  
3 and brought into the working phases, which changes over  
4 the years. We're coming to the end of our useful life of  
5 this landfill, and over the next year we plan on actually  
6 going out for the design of a new landfill which we're  
7 hoping the new cell will be located; in this general area  
8 of the quarries, adjacent to the existing landfill.  
9 Volume calculations indicate that if we can do this,  
10 we'll be able to provide a landfill that will meet the  
11 City's needs for the next forty-five (45) years. And  
12 with the -- it's not shown on this drawing, but, then  
13 again, there's the quarry ju -- just of north of that,  
14 which, again, has a capacity of thirty (30) to forty (40)  
15 years, so we can meet the City's needs for almost a  
16 hundred years.

17                   This year we met with Transportation  
18 Canada because there was a problem with the landfill  
19 attracting birds, in terms of gulls and ravens, that pose  
20 a safety threat to -- to aircraft. As such, we've met a  
21 lot of their, I guess, requirements and stipulations in  
22 terms of practices, how to improve our practice to ensure  
23 to reduce the risk associated with attracting birds to  
24 this landfill. Transport Canada today's extremely happy  
25 with the work we've done and they have no problems with

1 us actually opening a new cell in the adjacent quarry.

2                   Yeah. Well, I guess our 1999 study said  
3 the landfill reached its capacity by 2008. Through waste  
4 diversion and increased recycling, we've actually be able  
5 to ex -- extend the life of the la -- of the landfill, as  
6 well as we'll all doing a lot of additional work where  
7 we've identified volume that could be filled to help us  
8 to contour the landfill to ensure there's proper runoff  
9 as we close out the existing landfill.

10                   Now, as I said, ex -- expected capacities  
11 -- well, the landfill's expected to reach its capacity on  
12 2011, and hopefully we'll have already completed out  
13 design and constructed our new landfill cell to start  
14 depositing waste in that landfill. As well, as part of  
15 this new design, we'll also be incorporating a proper  
16 capping -- proper capping as part of our closure plan,  
17 which will be introduced to the -- to the Board and for  
18 their approval.

19                   Existing landfill expansion. As I said  
20 earlier, we're hoping to use the adjacent quarries. Part  
21 of this will be also to -- to con -- to break the  
22 landfill down in just five (5) year cells. This will  
23 allow us to construct and close out these cells in a more  
24 timely and efficient manner and not wait until the exa --  
25 as the landfill is completely filled before approaching

1 the -- or addressing the closure of each of these cells.

2                   Here's another map just showing the  
3 quarries. Again, this quarry, we're assuming that there's  
4 going to be a joint use here with the existing user,  
5 which is a -- one of the local construction companies.  
6 So are -- what -- anticipating is they'll continue  
7 blasting out all this rock to increase -- create more  
8 volume for us to deposit our -- our waste. Again,  
9 further north, is the alt -- the RTL quarry. At some  
10 time -- by the time we're ready to use that area, they'll  
11 have used up all the material in this area and allow us  
12 to expand the landfill further north.

13                   Landfill drainage. Currently, there's  
14 four (4) sampling sites around the landfill which are  
15 sampled twice per year. And, again, these are located at  
16 various areas where the major drainage actually runs  
17 towards the surrounding water bodies. One (1) existing  
18 sampling point is now located where our snow dump is and  
19 can't be reached for most of the year, so we'll be  
20 working with INAC to determine a new location, a new  
21 sampling point, which will be part of the new water  
22 licence.

23                   As I said earlier, the landfill is expect  
24 -- is expanded by three (3) years due to increased  
25 recycling and waste-reduction programs. Again, the

1 landfill closure and a -- new landfill design plans will  
2 be completed and -- within 2010 and presented to the  
3 Board for approval.

4 Stormwater management. The City actually  
5 has major and minor system components. The minor system  
6 includes our underground components such as catch basins,  
7 manholes, and piping. As in most jurisdictions, design  
8 is -- the -- the infrastructure was designed to handle a  
9 five (5) to twenty-five (25) year storm. Our major  
10 systems include roadways and large overland runoff  
11 retention such as parks and open green spaces. This  
12 selsums -- system's ver -- is rarely used and essentially  
13 required when we have a major event which is once every  
14 hundred years.

15 The city of Yellowknife has five hundred  
16 and twenty-nine (529) catch basins, three hundred and  
17 fifteen (315) storm manholes, and over seventeen (17)  
18 kilometres of storm sewer pipe. This map indicates the  
19 various catchment areas.

20 Incorporated into the City's storm water  
21 management plant are essentially several, I guess, non-  
22 fish-bearing lakes or ponds, including Frame Lake, Range  
23 Lake, and -- Range Lake,, and as well as Niven Lake.  
24 These -- these lakes or ponds actually act as settlement  
25 ponds where the water is directed to eventually before

1 making its way through a series of ponds and lakes and  
2 infrastructure and outfalls to the various water bodies  
3 surrounding the City. As well, most of the Kam Lake area  
4 drains into the Kam Lake, and there's several areas in  
5 the downtown core that actually drain into Yellowknife  
6 Bay and the small area drains into Back Bay.

7                   Stormwater Management Plan. The  
8 Stormwater Management Plan was submitted in December  
9 2008. A sampling plan -- plan was approved for 2009 with  
10 the -- the Stormwater Management Plan to be resubmitted  
11 following sampling. The new, or the revised plan will be  
12 submitted in February of 2010 for a review. Again,  
13 summary of the 2009 Stormwater Sampling Program is  
14 complete. The revised report will be submitted in  
15 February 2010 for review and comments by the Board and  
16 the Intervenors.

17                   Water Licence Amendments. Again, duration  
18 of the li -- licences are a major concern here. It does  
19 require a great deal of effort and time to produce or  
20 subm -- work to produce our application and work with the  
21 various groups, so in this case we're asking for us --  
22 for the City to be able to obtain a licence duration of  
23 fifteen (15) years.

24                   As I said, it takes almost two (2) years  
25 for the City to properly prepare for the water licence



1 application, and the fifteen (15) year licence will allow  
2 more time to -- to be -- for the allotted plans, manuals,  
3 and studies to be completed as a requirement by the  
4 Board. As well, I believe the City of White --  
5 Whitehorse actually received a fifteen (15) year water  
6 licence period.

7                   Essentially that's our -- our  
8 presentation, short and sweet. I think many Intervenors  
9 know exactly what the system does and what's it's capable  
10 of doing, and as Anne said earlier, that the City is  
11 always looking at ways to improve our system and to be  
12 diligent in terms of knowing what our surrounding  
13 environment is and to ensure it's not impacted in a  
14 negative manner.

15                   One again, I'd like to the thank the Board  
16 for allowing us to make our presentation.

17

18 QUESTION PERIOD:

19                   THE CHAIRPERSON: And thank you to the  
20 City of Yellowknife for a very informative presentation.  
21 We'll now go to questions for the City, starting with  
22 Environment Canada. If you could identify yourself it  
23 would be great.

24                   MS. ANNE WILSON: Thank you. It's Anne  
25 Wilson with Environment Canada. I just have one (1)

1 point of clarification and two (2) questions for the  
2 City.

3                   The clarification is in respect to the  
4 Canada-wide strategy for the management of municipal  
5 effluent -- wastewater effluent, rather; that isn't going  
6 to apply in the North for some time to come. There has  
7 to be research done in the meantime to see what would be  
8 applicable and feasible standards for the North. So I  
9 really want to commend the City for planning ahead for  
10 this, because it will be in effect, we just can't at this  
11 time forecast what those numbers and limits might be.

12                   So I have two (2) questions with respect  
13 to the aspect of nutrients. The City has suggested that  
14 the criteria be that effluent is non-toxic, with respect  
15 to ammonia. And they rightly pointed out that ammonia  
16 toxicity is affected by what pH or acidity the water has.  
17 It's also very much affected by the temperature of the  
18 water. Now it's in our favour that our climate is cold  
19 and our waters are cool, however, the decant period we're  
20 going to see the sewage effluent outflow reach  
21 temperatures of probably 15 to 20 degrees. At those  
22 levels, ammonia is much more toxic; it's in the NH<sub>3</sub>  
23 forum, which is the bad guy.

24                   So I have a little bit of hesitation in  
25 supporting the recommendation that that be a criteria,

1 because the toxicity testing will tell us how we're doing  
2 but if you try and calculate that that would be  
3 difficult. Has the City thought about how that could be  
4 practically put forward? Sorry, long question.

5 THE CHAIRPERSON: To the City of  
6 Yellowknife.

7

8 (BRIEF PAUSE)

9

10 MR. DENNIS KEFALAS: Dennis Kefalas, city  
11 of Yellowknife. Actually, what we're going to do, Anne,  
12 as part of our -- our -- a request is actually do the  
13 toxicity sampling in the fall, as, I guess, indicated  
14 throughout -- through your question, in terms of trying  
15 to determine the toxicity during the decant season when  
16 the waters are much warmer and do have an effect on the  
17 toxicity. So I guess what we're asking is that we would  
18 be able to do that this coming fall and determine what  
19 the impact is and toxicity is at that time.

20 Does that answer your question kind of?  
21 Somewhat?

22 MS. ANNE WILSON: Thank you. Okay, my  
23 next question -- thanks -- is in respect to phosphorus.  
24 And you mentioned the concentrations; has thought been  
25 given to the loadings that are going out into the system

1 as well?

2

3

(BRIEF PAUSE)

4

5 MR. DENNIS KEFALAS: I think what we'll  
6 do as part of our -- sorry, Dennis Kefalas, city of  
7 Yellowknife.

8 We haven't done much study on that, what's  
9 our actual loading on the system. However, I think part  
10 of this -- I guess what we want to do within the first  
11 year or first -- by 2011, is we could look at ways of  
12 seeing how we can reduce the actual loading into the  
13 lagoon to help address the phosphorus situation. And I  
14 think as we go on and do our testing to see what the  
15 concentrations are further downstream, we can see what  
16 the actual impact is and see if there is a need to try  
17 and address it before it actually enters the lagoon.

18 MS. ANNE WILSON: Okay. Thank you. That  
19 -- Anne Wilson, that's all for Environment Canada.  
20 Thanks.

21 THE CHAIRPERSON: Okay. Thank you for  
22 that. Then we'll go to GNWT for ENR, if you can identify  
23 yourself.

24 MS. AILEEN STEVENS: Hi, Aileen Stevens  
25 with ENR. We don't have any questions for the City at

1 this time. Thanks.

2 THE CHAIRPERSON: Okay. Thank you.  
3 INAC?

4 MR. ROBERT JENKINS: Thank you, Mr.  
5 Chair. Robert Jenkins, with INAC. We have no questions.

6 THE CHAIRPERSON: Okay. Thank you.  
7 North Slave Metis Alliance?

8 MS. DANIELLE DE FIELDS: Danielle De  
9 Fields, with the North Slave Metis Alliance. We have no  
10 questions.

11 THE CHAIRPERSON: Okay, thanks. Any  
12 registered speakers?

13

14 (BRIEF PAUSE)

15

16 THE CHAIRPERSON: Okay, any questions  
17 from the general public?

18 We'll go to Board staff, technical  
19 advisors and/or legal, the floor is yours.

20 MR. JAMIE VANGULCK: Thank you, Mr.  
21 Chair. Jamie Vangulck. INAC recommended a revised  
22 Fiddler's Lake treatment system plan for the sewage  
23 disposal facility, and the Proponent has agreed to  
24 complete this plan. Could the Proponent provide  
25 perspective on the timeframe needed to complete the

1 revised plan and a recommendation on when this plan could  
2 be submitted to the Water Board?

3 MR. DENNIS KEFALAS: Dennis Kefalas, City  
4 of Yellowknife. I think we've recommended or have asked  
5 -- requested a twenty-four (24) month period to complete  
6 the plan.

7 MR. JAMIE VANGULCK: I have another  
8 question, Mr. Chair. INAC also recommended a sewage  
9 effluent study, according to CCME 2009 Wastewater  
10 Treatment Strategy. The Proponent has agreed to this  
11 study and completed by the year 2011. Could the  
12 Proponent provide perspective on the timeframe needed to  
13 complete the report and submit it to the Board, realizing  
14 that it's a three (3) year study and it may start at some  
15 point in time in the near future, so...

16

17 (BRIEF PAUSE)

18

19 MR. DENNIS KEFALAS: Are we talking about  
20 the effluent characterization study that's going to be  
21 completed for 2011, or the CBOD to be added to the  
22 parameters as part of the -- what we're actually testing  
23 for?

24 THE CHAIRPERSON: You'll still have to  
25 identify yourself for the --

1 MR. DENNIS KEFALAS: Dennis Kefalas, City  
2 of Yellowknife, excuse me. Again, we're not sure which -  
3 - which study you're actually talking about.

4 THE CHAIRPERSON: Jamie...?

5 MR. JAMIE VANGULCK: Thank you, Mr.  
6 Chair. Jamie Vangulck. This would be the wastewater  
7 effluent study that you said will be completed by 2011.  
8 And I'd just like clarification, is that completion of  
9 the report by 2011 or is that just completion of the  
10 study by 2011? So when would the report be ready to be  
11 submitted to the Water Board?

12 MR. DENNIS KEFALAS: We'd be looking to  
13 actually submit the report at March 2012.

14 THE CHAIRPERSON: And that answer was  
15 from who?

16 MR. DENNIS KEFALAS: That's from Dennis  
17 Kefalas, City of Yellowknife.

18 THE CHAIRPERSON: Thank you. Jamie?

19 MR. JAMIE VANGULCK: Thank you, Mr.  
20 Chair. This next question deals with the CBOD study.  
21 INAC and also Environment Canada had remac -- recommended  
22 a three (3) year study to develop a -- a trend between  
23 CBOD and BOD. The Proponent has agreed to complete this  
24 study.

25 Could the Proponent provide perspective on

1 the timeframe needed to complete the report on the study  
2 and when it could be submitted to the Mackenzie Valley  
3 Land and Water Board?

4 (BRIEF PAUSE)

5  
6 MR. DENNIS KEFALAS: Based on what we'll  
7 need to -- sorry, Dennis Kefalas, the City of  
8 Yellowknife. Sorry about that, Mr. Chair. We're looking  
9 at probably third quarter 2014, in terms of they will  
10 acquire all the information and actually provide or  
11 produce a report.

12 Just to -- to expand on what Anne was  
13 requiring earlier in one of her questions, Anne Wilson  
14 from the -- from the Ministry of the Environment, I would  
15 like to say that during this next summer too, we'll also  
16 -- as we go and do our sampling, our monthly sampling,  
17 we'll also take temperature samples to determine what  
18 sort of temperatures we can expect throughout the system  
19 at the various sample points to help us with our analysis  
20 of the toxicity to see what we can be looking -- looking  
21 at -- looking at what water temperatures we're dealing  
22 with as we go along with that report.

23 THE CHAIRPERSON: Thank you. Further,  
24 Jamie?

25 MR. JAMIE VANGULCK: Thank you, Mr.



1 Chair. I have a different question on the -- the line of  
2 -- around the topic of phosphorus and ammonia treatment  
3 for your sewage. Your presentation provided some values  
4 for ammonia concentrations. And if I wasn't mistaken  
5 they seemed to be a bit different than what was in your  
6 intervention.

7 So I'd just like to clarify -- if you  
8 could clarify what your recommended ammonia  
9 concentrations are?

10

11 (BRIEF PAUSE)

12

13 MR. DENNIS KEFALAS: I think what we're -  
14 - Dennis Kefalas, City of Yellowknife. In terms of  
15 ammonia, I think what we're looking at is -- is  
16 objectives in terms of our values, which includes a 5  
17 milligrams per litre average concentration, and 10  
18 milligrams grab -- grab maximum concentration.

19 And for phosphorus, we haven't really  
20 established what the concentrations would be for  
21 phosphorus, and we're hoping that the future study will  
22 help us establish through the Board's approval what those  
23 concentrations will be for the water licence.

24 THE CHAIRPERSON: Thanks. Further,  
25 Jamie...?

1 MR. JAMIE VANGULCK: Thank you, Mr.  
2 Chair. You referenced a phosphorus study with the aim of  
3 completion in 2011. Is -- is that a commitment that  
4 you're making? And -- and in that study will it say what  
5 your recommendations are for phosphorus limits?

6 MR. DENNIS KEFALAS: Dennis Kefalas, City  
7 of Yellowknife. Our commitment is to complete that by  
8 2011, as we indicated -- or March -- March 2012. And  
9 included in that will be concentrations -- or the  
10 recommending concentrations we believe are fair.

11 As well, during the process of that study  
12 we'll be also meeting with the various Intervenors to  
13 discuss the possible, I guess, concentrations that would  
14 be accepted by the Board.

15 THE CHAIRPERSON: Okay. Thank you.  
16 Further, Jamie...?

17 MR. JAMIE VANGULCK: Thank you, Mr.  
18 Chair. Environment Canada recommended a feasibility  
19 study on sludge removal from the sewage disposal  
20 facility. The Proponent recommended completion of the  
21 study if the lagoon capacity and the effluent quality  
22 become a concern.

23 So what are the lagoon capacity and  
24 effluent quality thresholds that will be used to trigger  
25 when this study is required?

1                   MR. DENNIS KEFALAS:   Dennis Kafalas, City  
2 of Yellowknife. At this time we haven't really  
3 established that criteria, but if it becomes a point  
4 where we notice the lagoon is overflowing on a regular  
5 basis much earlier than anticipated in some -- in some  
6 cases, as well, we find the concentrations that were not  
7 in conformance with the water licence criteria for  
8 biological matter, I think that will help us determine  
9 the -- the need to -- to proceed with additional studies  
10 on potential treatment options.

11

12   (BRIEF PAUSE)

13

14                   THE CHAIRPERSON:   Thank you for that.  
15 More questions, Jamie?

16                   MR. JAMIE VANGULCK:   Yes, Mr. Chair, just  
17 to follow up on that response.

18                                   Your response did say that if you were not  
19 in compliance with the water licence, that that might be  
20 a trigger to complete the feasibility study.

21                                   Is that a onetime event that you expect  
22 before completion of this study, so onetime event of  
23 noncompliance, or is it a multiple noncompliance event?  
24 I guess further clarification on that threshold would be  
25 appreciated.

1                   MR. DENNIS KEFALAS:   Dennis Kefalas, City  
2 of Yellowknife. I think the City would have to see a  
3 trend that we weren't in compliance, because in some  
4 cases there could be some sort of problems with the  
5 actual testing of the sampling.

6                   As well, what the City has done in the  
7 past is we already carried out a survey of the area to  
8 see what potential volume can be achieved by expanding  
9 the existing lagoon in terms of increasing the size of  
10 the berms that are surrounding the outfall area.

11                   So I think the first -- if first we see  
12 there's a problem with capacity, we'll be looking to  
13 expand. As well, again, if we see a trend with the  
14 concentration levels, we'll be looking to provide  
15 additional treatment of some sort, which will become an  
16 amendment in the existing or the new licence if we find  
17 that we have to apply some additional treatment.

18                   THE CHAIRPERSON:   Thank you.  
19 Followup...?

20                   MR. JAMIE VANGULCK:   Thank you, Mr.  
21 Chair. I'd just like to move on to a different line of  
22 questioning.

23                   Could the Proponent clarify the location  
24 of where water from the compost facility is discharged on  
25 the map?



1 probably reviewing the background element concentrations  
2 or characterizations, so I think we'd want to complete  
3 that within 2010 and have a report ready for 2011, late  
4 third quarter 2011.

5 THE CHAIRPERSON: Okay. Follow-up,  
6 Jamie...?

7 MR. JAMIE VANGULCK: Thank you, Mr.  
8 Chair. A different line of questioning here again.

9 Environment Canada had recommended a study  
10 to understand metal concentrations in the vicinity of the  
11 solid waste disposal facility.

12 When does the Proponent recommend  
13 completion of this study?

14 MR. DENNIS KEFALAS: Dennis Kefalas, City  
15 of Yellowknife. It's anticipated, as -- as I indicated  
16 in the previous question, that we would hopefully have  
17 that done or gather the information in 2010 and include  
18 that as part of that report for 2011 to try and determine  
19 background concentrations of elements local to the area.

20

21 (BRIEF PAUSE)

22

23 MR. DENNIS KEFALAS: Dennis Kefalas, City  
24 of Yellowknife. Just to expand on that, too; as well as  
25 -- it'll perform a -- a component of the RFP reporting

1 out as part of our land -- new landfill design and  
2 closure plan. A part of it will be the characterization  
3 of elements within the landfill area.

4 THE CHAIRPERSON: Okay, thanks.

5 Further...?

6

7 (BRIEF PAUSE)

8

9 MR. JAMIE VANGULCK: Thank you, Mr.  
10 Chair.

11 Could the Proponent provide a summary of  
12 the snow disposal areas within the City of Yellowknife  
13 and -- that are used by the Proponent and also third-  
14 party contractors?

15 MR. DENNIS KEFALAS: Dennis Kefalas, City  
16 of Yellowknife. Everywhere within the City boundaries.  
17 Sorry, just kidding. We have two (2) major landfill or I  
18 guess snow dumps that the City currently uses. One (1)  
19 is located, I guess, off the extension of Deh Cho  
20 Boulevard in Kam Lake, which was the Old Lagoon Road but  
21 is now just off of the new Yellowknife Bypass Road.

22 The second one (1) that -- that we use to  
23 service the downtown and business district or downtown  
24 area and -- and Old Town is actually located between the  
25 existing landfill and the adjacent quarry.

1                   And, as well, the contractors' snow dump  
2 is located just off of the overflow parking for the ski  
3 club, which is, I guess, south of the existing landfill  
4 at the lower plateau.

5                   Dennis Kefalas with the City. We'd be  
6 happy to provide a map to the Board showing these  
7 locations.

8                   THE CHAIRPERSON:    Go ahead, Jamie.

9                   MR. JAMIE VANGULCK:    Thank you, Mr.  
10 Chair.

11                   On the topic of the snow disposal areas,  
12 is the drainage runoff from each of the snow disposal  
13 areas managed, and would that information be described in  
14 the Stormwater Management Plan for the City?

15

16                                   (BRIEF PAUSE)

17

18                   MR. DENNIS KEFALAS:    Dennis Kefalas, City  
19 of Yellowknife. At this time it's not. We've actually  
20 located the -- the snow dumps in areas where we know --  
21 where the topography allows for the water to flow in  
22 certain areas or certain -- towards certain directions.

23                   The one (1) in Kam Lake actually flows  
24 through a -- a wetlands before entering what we call Lake  
25 6, and then as these minor lakes, I guess, reach a



1 certain capacity, flow into one (1) of -- into each  
2 other, and there's four (4) lakes or ponds, actually --  
3 duck ponds, if you want to describe them better -- before  
4 they enter -- before that one (1) actually enters a fish-  
5 bearing water body which is Grace Lake.

6                   The one (1), the snow tract -- snow -- or  
7 the contractors' snow dump is actually located in an area  
8 that -- where we can actually test the water or sample  
9 the runoff as part of our -- our storm water management  
10 samp -- sampling program located at the various points, I  
11 guess, south and west of the landfill. Same could be  
12 said for our other major snow -- snow dump which is  
13 located between the two (2) quarries.

14                   It's just normal runoff that, I guess,  
15 it's not actually controlled in the sense that we've  
16 actually established any sort of berms or decant  
17 structures to allow for the water to run off. It just  
18 uses the natural topography in each of the locations.

19                   MS. JENNIFER BAYLY-ATKIN: Jennifer  
20 Bayly-Atkin. Could you please provide an undertaking to  
21 provide the maps to the Board?

22                   MR. DENNIS KEFALAS: Dennis Kefalas.  
23 Yes.

24                   MS. JENNIFER BAYLY-ATKIN: So the  
25 undertaking then would be to provide the maps for the --

1 the Kam Lake disposal facility, the Deh Cho Boulevard  
2 disposal facility and the solid waste disposal facility  
3 locations by the undertaking date, which I believe is a  
4 week after the Hearing. Would that be enough time?

5 MR. DENNIS KEFALAS: Dennis Kefalas, City  
6 of Yellowknife. Sure, that's, yeah, more than adequate.

7 THE CHAIRPERSON: Okay. Thank you, then.  
8 So that will be undertaking number 1.

9

10 --- UNDERTAKING NO. 1: City of Yellowknife to  
11 provide maps for the Kam  
12 Lake, Deh Cho Boulevard, and  
13 solid waste disposal facility  
14 locations

15

16 THE CHAIRPERSON: And Jamie, are you  
17 going to continue?

18 MR. JAMIE VANGULCK: Thank you, Mr.  
19 Chair.

20 The Proponent described plans to move into  
21 a new location for depositing waste close to the quarry.  
22 Has the Proponent considered the impacts of blasting in  
23 that adjacent quarry on the management of leachate from  
24 the current landfill cell and the potential impacts of  
25 leachate containment on the proposed future cells?

1                   MR. DENNIS KEFALAS:   Dennis Kefalas, City  
2 of Yellowknife. Part of our new design will actually  
3 incorpor -- incorporate a leachate collection system,  
4 including liners. Part of that -- part of our  
5 preliminary engineering has identified the need to look  
6 at the potential impact that blasting will have on this  
7 new landfill cell.

8                   In terms of the old landfill, the City has  
9 agreed to carry out a sampling program by actually  
10 tapping into or creating sampling wells where we expect  
11 the -- I guess the subsurface drainage flows from the  
12 existing landfill. I think that's part of our agreement  
13 with ENO -- ENR.

14                  THE CHAIRPERSON:   Okay. Thank you.  
15 Jamie?

16                  MR. JAMIE VANGULCK:   Thank you, Mr. Chair.  
17                  The Proponent is to submit an A&R plan as  
18 a requirement of their water licence for the solid waste  
19 facility. Could the Proponent clarify if the A&R plan  
20 that they're developing is for the entire solid waste  
21 facility or only for the current landfill cell?

22                  And what I mean by the entire facility is  
23 the supporting infrastructure such as the compost areas,  
24 the soil containment or treatment area, et cetera.

25                  MR. DENNIS KEFALAS:   Dennis Kefalas, City

1 of Yellowknife. The A&R plan will incorporate both the  
2 existing and future landfills.

3 THE CHAIRPERSON: Thank you. Further,  
4 Jamie...?

5

6 (BRIEF PAUSE)

7

8 MR. JAMIE VANGULCK: Thank you, Mr. Chair.  
9 One (1) more question.

10 The Proponent -- the Proponent's  
11 consultant actually completed a study of the quarry and a  
12 core use plan in 19 -- in 2006 and recommended a  
13 feasibility study on the current operations of the quarry  
14 and the landfill site construction and operations of the  
15 new cell.

16 Does the Proponent agree with these  
17 recommendations of their consultant and commit to  
18 completing this feasibility study?

19 MR. DENNIS KEFALAS: Dennis Kefalas, City  
20 of Yellowknife. As you know, a lot of studies that are  
21 submitted by private sector consultants require or  
22 recommend a need to actually, I guess, complete further  
23 studies I guess as part of their business development  
24 program. However, the City will -- has agreed to look at  
25 what impact the continued quarry operations will have on

1 the existing landfill -- or, sorry, the future cell.  
2 However, we wouldn't agree on looking at dictating how  
3 the existing quarry operator will conduct his business,  
4 and feels that that's not really something that the City  
5 can dictate or would dictate.

6                   Essentially what we've done is established  
7 a, I guess, lease -- leases that dictate the need to do  
8 a, I guess, joint use of an existing lease. And we  
9 actually have some clauses in those leases to allow us to  
10 -- to terminate those leases as the need arises for the  
11 City. However, as long as they're conducting their  
12 business in an appropriate manner that's within the  
13 guidelines set out by the GNWT, the City really will not  
14 comment or dictate on how those quarry operators will  
15 operate.

16                   THE CHAIRPERSON: Okay, thanks. Have  
17 anything further to that, Jamie?

18                   MR. JAMIE VANGULCK: Just a follow-up  
19 question, Mr. Chair. Does the Proponent foresee issues  
20 with the construction and operations of a new cell and  
21 the operations of a quarry, and if there are issues or  
22 concerns, where would that information be presented?  
23 Would it be a design report that's submitted to the  
24 Board, that -- that sort of information would come forth  
25 to understand how you are going to manage your waste, or

1 could you recommend a method of presenting those  
2 challenges and operations of operating a quarry, and,  
3 also, operating a landfill and -- and constructing a new  
4 landfill cell?

5 MR. DENNIS KEFALAS: Dennis Kefalas, City  
6 of Yellowknife. Just to help clarify, at this time we do  
7 have ongoing conversations and -- and discussions with  
8 the quarry operator.

9 In terms of like -- one (1) of the  
10 problems that we've had is actually blasting and having  
11 to evacuate the landfill as part of the safety  
12 precautions associated with that type blasting. What  
13 we've not recommended them to do is saying that any major  
14 blasting, or all blasting, will occur after the time the  
15 landfill's actually closed.

16 Part of this new, I guess, procedures on -  
17 - on how we'll approach a joint use of that existing  
18 lease, that will be and can be included in our solid  
19 waste operations manual to help identify any potential  
20 problems and the proper mechanisms and practices to -- to  
21 address these problems.

22 THE CHAIRPERSON: Okay, thanks. Is that  
23 it for you, Jamie? Okay. So thanks for that.

24 We'll go to an Intervenor presentation now  
25 with Environment Canada. Actually, give us a minute

1 here. I just forgot the most important part. The Board  
2 members have some questions, starting with Sabet.

3 MS. ELIZABETH BISCAYE: Somebody has to  
4 keep him in line. Thank you, Mr. Chair.

5 I have just one (1) question. At the  
6 beginning of your presentation you mentioned that -- that  
7 consumption of water in the City has actually decreased  
8 over the years, which is, when you really consider the  
9 population has increased considerably, and then with  
10 everything that gets put in place, I mean there's more  
11 need for consumption. It's -- you've had some, I  
12 imagine, tests or analysis done. In -- I think some of  
13 the documents had mentioned something about repairing  
14 some of the leaks and things like that.

15 What are some of the other reasons for the  
16 decrease in water consumption that you can identify?

17 MR. DENNIS KEFALAS: Dennis Kefalas, the  
18 City of Yellowknife. What we found a lot is there was a  
19 lot of system bleeders within the distribution system,  
20 which is actually just dumping into our sanitary  
21 collection system. So what we've tried to do, or are  
22 doing constantly, is eliminating these bleeders, because  
23 I mean that's essentially turning on your tap and just  
24 letting it flow down the drain, so it's just -- it's more  
25 wastage of water. That's how we've reduced the overall

1 consumption in the City.

2                   As well, we find that individuals are --  
3 like individual residents are actually incorporating low  
4 flush toilets and they're conserving water on their part.  
5 Our Finance Department constantly says that -- are  
6 looking for ways to increase our revenues, and con -- and  
7 found that actual consumption has gone down overall, in  
8 terms of from our -- our -- I guess our paid users, both  
9 commercial and residential. So we're seeing a  
10 combination of both, people trying to conserve water at  
11 home, as well as us reducing these system bleeders, a  
12 wastage of water.

13                   We've also incorporated certain practices  
14 with how we actually heat our water, because we have to  
15 temper our water to keep it a certain temperature. In  
16 the past what we did -- used to do is heat the water way  
17 up, and then just let it drop right down, and you find  
18 there's a lot of contraction and expansion of the water  
19 mains, which produce more leaks. So now what we're doing  
20 is heating the water at a constant temperature, and this  
21 reduced -- redu -- reduced the number of leaks that we've  
22 experienced in the past.

23                   And every summer and -- and we have our  
24 leak detection equipment out surveying the whole town to  
25 try and -- to identify the leaks, which are repaired in a



1 timely manner. So, really, it's more of a reduction of  
2 wastewater, and, plus, actual conservation on our users.

3 THE CHAIRPERSON: Okay, thanks. Further,  
4 Sabet...?

5 MS. ELIZABETH BISCAYE: Elizabeth  
6 Biscaye. No, no further questions, Mr. Chair.

7 THE CHAIRPERSON: Okay. Pat Laroque...?

8 MR. PAT LAROQUE: No questions, Mr.  
9 Chair. Thank you.

10 THE CHAIRPERSON: Floyd Adlem...?

11 MR. FLOYD ADLEM: I just have just some  
12 clarification. It seems like the snow dump facilities  
13 are rather haphazard or -- or you just sort of haul snow  
14 and dump it where you can.

15 Is there any thought in sort of organizing  
16 that so that it -- you have a location and it can be  
17 monitored and there can be samples taken because I  
18 suspect there's quite a bit of stuff in that snow?

19 MR. DENNIS KEFALAS: Thank you. Dennis  
20 Kefalas, City of Yellowknife. We -- we actually  
21 completed a snow dump study that would identify several  
22 locations that's the most appropriate, and in terms of  
23 operationally speaking, and how we could actually monitor  
24 some of the water if need -- need arises. And that's how  
25 we identify the current location in Kam Lake, as well as

1 the one out at the landfill.

2 MR. FLOYD ADLEM: No further questions.

3 THE CHAIRPERSON: Okay, thank you.

4 Floyd...?

5 MR. FLOYD ADLEM: No.

6 THE CHAIRPERSON: Anything further from  
7 staff? Okay. Great. Then we will go to Intervenor  
8 presentation, Environment Canada.

9

10 PRESENTATION BY ENVIRONMENT CANADA:

11 MS. ANNE WILSON: Thanks to the -- Mr.  
12 Chairman and the Board for allowing us to make this  
13 presentation. As mentioned earlier, my name is Anne  
14 Wilson. I'm a water pollution specialist with  
15 Environment Canada, and with me today is Jane Fitzgerald,  
16 who works with us as an environmental assessment  
17 specialist.

18 I'll start with a bit of an overview.  
19 I'll give you a brief synopsis of Environment Canada's  
20 mandate, and then we'll itemize our intervention concerns  
21 with the sewage disposal and treatment, covering system  
22 ama -- syptom -- system optimization, nutrients, sludge  
23 management, and the use of bioassay testing.

24 Then we'll go to the solid waste disposal  
25 facility concerns. These include landfarm discharges,

1 leachate characterization, and landfill background metals  
2 levels. We'll go over the operation and maintenance  
3 manual revisions and touch on the licence term before  
4 concluding.

5           Okay, so Environment Canada's mandate with  
6 respect to this submission is really based on two (2)  
7 pieces of relevant legislation, the Canadian  
8 Environmental Protection Act and the Fisheries Act.

9           Within the Fisheries Act there are  
10 sections pertaining to pollution prevention. The main  
11 one affecting this submission is the one in subsection  
12 36(3) of the Act, which prohibits the deposit into fish  
13 bearing waters of any substances that are deleterious to  
14 fish.

15           To define deleterious, well, it's fairly  
16 broadly defined in legal precedent, but broadly includes  
17 any substance with a potentially harmful chemical,  
18 physical, or biological effect on fish or fish habitat.

19           And one (1) measure of deleteriousness is  
20 using the rainbow trout bioassay test, the acute  
21 lethality test. Further information is provided in our  
22 written intervention on the legislation that Environment  
23 Canada administers.

24           We'll start with the sewage disposal and  
25 treatment system. I have the benefit of being around

1    awhile and some corporate memory with this file, and, in  
2    the past, we had the sense that there was a fairly --  
3    some lack of understanding of the sewage treatment system  
4    capacity and its long-term ability to treat the waste  
5    from the City of Yellowknife. That, in part, gave rise  
6    to the previous licence's condition requiring a treatment  
7    study.

8                   Environment Canada has concerns that  
9    delaying improvements to the system can negatively affect  
10   the treatment of effluent in the long term.

11                   The City submitted a report by Dillon  
12   Consulting that outlined details on the system. This  
13   report mentioned that during the twenty (20) year  
14   planning horizon ahead of us we can expect the lagoon  
15   holding time to decrease significantly, possibly to the  
16   point where decant has to begin in May.

17                   Now if that's the case we're going to be  
18   releasing minimally treated effluent that is not going to  
19   receive a lot of treatment from the wetlands because the  
20   growing season will not have really started and we won't  
21   have the benefit of the summer temperatures quite yet.  
22   So we wouldn't be seeing treatment that would reduce the  
23   -- the biological oxygen demand, the ammonia and other  
24   parameters. So foreseeably effluent quality will  
25   deteriorate, it will get worse.

1                   So as the population of the City grows,  
2 and loadings increase, the system capacity and  
3 attenuation would be reduced over time.

4                   That's why we're really pushing to plan  
5 ahead for enhancing treatment now. We want to maintain  
6 the ability of the lagoon to treat the sewage, and the  
7 longer we wait the more accumulations within the system  
8 we're going to get of solids and of nutrients and  
9 reducing the overall capacity of the treatment system to  
10 -- to improve our -- our effluent.

11                   So our recommendation is that options  
12 should be evaluated for managing or configuring the  
13 system so that the effluent quality is improved for the  
14 long term, and that ammonia and phosphorous discharges  
15 are minimized. The City has proposed that they will  
16 submit a revised Fiddler's Lake treatment system plan,  
17 and this will include information on the steps the City  
18 will implement should additional treatment of sewage be  
19 required.

20                   So I really appreciated the question from  
21 Jamie as to what those thresholds are going to be in  
22 respect of other studies. And we would hope that the  
23 plan would include definite timelines and thresholds when  
24 we see treatment being needed. We don't want to be in a  
25 reactive position once problems have already developed.

1                   We've heard a bit about nutrients here  
2 already today. The expiring licence required a treatment  
3 plan to meet specified targets for ammonia and  
4 phosphorous. I went through the reasons for a decision  
5 for the expiring licence, and those were initially  
6 contemplated as hard limits or licence criteria,  
7 tentatively for 2008, so we're a little late on that.  
8 But we don't suggest that these be put in as criteria. I  
9 think they should go in as objectives, at least for the  
10 term of this licence, or until we can figure out what  
11 appropriate treatment can be installed.

12                   The City has agreed to using the levels of  
13 5 milligrams per litre average, and 10 milligrams per  
14 litre maximum as objectives to be met at their compliance  
15 point at F3. And we do note that the ammonia levels have  
16 very rarely been exceeded at this -- at the outflow.

17                   We'll just talk a bit about phosphorous  
18 next. Now phosphorous is not a toxic element, but it's  
19 responsible for excessive algal growth and that can lead  
20 to other problems as well as -- as the -- the amount of  
21 plants you see around the outfall in Great Slave Lake.  
22 The sediments accumulate phosphorous as algal -- as the  
23 algae take up the phosphorous in the water they will then  
24 die off, and in fall, that will accumulate in the  
25 sediments.

1                   Over winter you get less oxygen in the  
2 water, and the decomposition of all this not only takes  
3 up the oxygen, but it also releases more phosphorous. So  
4 you get a couple of problems happening with excessive  
5 phosphorous. That's why we feel it's very important to  
6 minimize further loadings, as well as the concentrations  
7 that are being discharged.

8                   So our recommendations are that to  
9 continue to meet the proposed targets for ammonia in the  
10 future, we'll have to identify and plan for treatment  
11 capability. So as far as ammonia goes, we would  
12 recommend that the City devise a plan for treatment in  
13 the first three (3) years of the licence term, in the  
14 early part of the licence term, and identify when this  
15 might be needed and feasible to install.  
16 Phosphorous removal should be investigated and  
17 implemented within the term of the renewed licence.

18                   The next slide looks at sludge management.  
19 Now as sludge accumulates in the lagoon this can affect  
20 not only the capacity of the lagoon, but the treatment  
21 that it affords. So periodic removal and disposal of the  
22 sludge is necessary. I think the last time it was done  
23 was somewhere between 1990 and 1993. I can't remember  
24 exactly which year it was.

25                   Our recommendation is that the sludge

1 management plans be developed and included within the  
2 operation and maintenance manual, and the City has agreed  
3 to this. And within the manual it should describe the  
4 practices, which include periodic field evaluation of the  
5 sludge accumulations and quality, so that they can plan  
6 for removal before it impairs effluent quality.

7           At this time we'll acknowledge that  
8 according to the Dillon report there is still good  
9 capacity and depth in the primary lagoon, so it will be  
10 something to plan for ahead.

11           We're going to talk a little bit about  
12 bioassay testing and just by way of background, the  
13 current water licence criteria states that the licence  
14 shall be non-acutely toxic in Part D2, so it's a -- a  
15 licence condition.

16           Bioassay testing is also a really good  
17 tool to demonstrate the effectiveness of treatment in  
18 achieving good effluent quality. Both rainbow trout, the  
19 fish, and daphnia, the water flea, tests are used.  
20 Testing can also confirm that effluent quality criteria  
21 are reasonable. However, we do suggest and support the  
22 changes to the conditions as proposed by the City. I'll  
23 outline those next.

24           The current testing requires a hundred  
25 percent survival of all the test organisms. This is even



1 higher than the control mortality, which is allowed, of  
2 10 percent. We feel it would be reasonable, given the  
3 point at which the sample is taken, that the criteria be  
4 between 50 and 90 percent survival of the test organisms.

5 We also suggest specifying a more simple  
6 test in the licence than the LC50 bioassay. All that's  
7 really needed is the pass/fail test, and in the expiring  
8 licence testing was required three (3) times a year. We  
9 do support the change to collecting samples twice  
10 annually, once right after spring freshet and again four  
11 (4) to six (6) weeks into the decant. We would like to  
12 have the effluent have time to make its way down the  
13 system to the discharge point.

14 By doing testing at these two (2) times we  
15 feel the range of conditions -- environmental conditions  
16 are also represented in the sampling. The current  
17 licence has EC taking the samples for testing and we do  
18 support the City's proposal that samples be submitted to  
19 an outside accredited lab for testing.

20 Our next few slides deal with the solid  
21 waste disposal facility. We've heard some discussion  
22 about the contaminated soil waters that are collected  
23 from the landfarm. These go into a lagoon and then into  
24 a treatment system. The plans call for treated water to  
25 be discharged into a nearby wooded area but it's unclear

1 to us if that area would be adequate to absorb the water.  
2 So we'd worry about saturation and erosion, contributions  
3 to leachate or even runoff to surface waters, depending  
4 on quantities.

5                   The City has agreed that they will review  
6 and study this and so our recommendation is that they  
7 look at the absorption ability of the discharge area,  
8 under different conditions, such as times of year and for  
9 a range of quantities to be released, and confirm that  
10 there's no risk associated with using this procedure.  
11 And the revision to the O&M manual should reflect  
12 whatever is found in this review.

13                   There's also been discussion of monitoring  
14 the leachate from the solid waste disposal facility and  
15 it sounds like some of our concerns will be addressed  
16 when they look at the different stations which would be  
17 appropriate. Right now there's four (4) sampling  
18 stations and these are assumed to capture leachate  
19 draining from the site. However, we're not really sure  
20 they are appropriate, given that these are surface runoff  
21 stations for sampling, and we don't have information on  
22 leachate movement throughout the site.

23                   So the City has agreed to undertake a  
24 study of the leachate and that meets our recommendation  
25 that further study be undertaken to measure and

1 characterize the leachate generated at the landfill.

2                   Drainage from the landfill site has been  
3 shown to have elevated metals but we don't know where  
4 these are coming from. You know, are they from high  
5 natural background levels, because we do have a  
6 mineralized geology in the area, or are they associated  
7 with drainage from the landfill? The City has agreed to  
8 conduct a study to determine the background metal  
9 concentrations around the solid waste facility and that  
10 will give us a baseline to help us know and understand  
11 where they're coming from.

12                   So the recommendation will be met that the  
13 City should document site conditions with respect to  
14 metals and propose appropriate criteria for any collected  
15 water. And if the source of elevated metals is the  
16 landfill, we'll need to have appropriate remedies  
17 identified.

18                   The City had proposed a couple of changes  
19 to the renewal water licence that we're going to comment  
20 on.

21                   The first one is in respect of an  
22 operation and maintenance manual for all waste disposal  
23 facilities as required in Part H, Item 1, of the current  
24 licence.

25                   The O&M manual that we have on file now

1 does not address the sewage collection and disposal  
2 facilities or the bag toilet waste facilities and  
3 activities. The City has agreed to produce an O&M manual  
4 which covers these things within twenty-four (24) months  
5 of licence renewal, although we just ask that this be a  
6 condition of the licence, that such a plan be developed  
7 for approval -- a review and approval by the Board in a  
8 timely fashion. And we also ask that this manual be  
9 reviewed and updated annually and even if the update is  
10 simply that there are no changes, as long as it's being  
11 looked at and kept current with updates for approval by  
12 the Board.

13 We also are commenting on the term of the  
14 licence. EC feels that the fifteen (15) year term  
15 requested by the City is a little bit too long. In the  
16 last licence, we've seen a flurry of activity over the  
17 last few years and we really commend the City for getting  
18 a lot done in a short time. But a lot of these  
19 submissions and actions were due much earlier in the  
20 licence term.

21 So we feel by having a renewal come up  
22 sooner rather than later, people are aware of deadlines  
23 and are looking at what needs to be done and what's  
24 ahead. And so a shorter licence term would be  
25 appropriate, and we feel no longer than ten (10) years.

1                   In conclusion, we'd like to thank the  
2 Board for the opportunity to participate in this renewal  
3 process for the City's water licence, and we'd also like  
4 to thank the City because they've been very easy to work  
5 with, constructive and interactive.

6                   With that, we'll try and answer any  
7 questions that people might have.

8

9 QUESTION PERIOD:

10                   THE CHAIRPERSON:   Okay, thank you for  
11 that then, Anne, and so we'll go to questions to  
12 Environment Canada. And the first up is the City of  
13 Yellowknife. Just identify yourselves beforehand so they  
14 get it on the record.

15                   MR. DENNIS KEFALAS:   Thank you, Mr.  
16 Chair. Dennis Kefalas with the City of Yellowknife. The  
17 City of Yellowknife has no questions at this time.

18                   THE CHAIRPERSON:   Okay, we'll go to the  
19 Government of the Northwest Territories, ENR.

20                   MS. AILEEN STEVENS:   Aileen Stevens with  
21 ENR. We have no questions at this time, thanks.

22                   THE CHAIRPERSON:   Okay, thank you.  
23 Indian and Northern Affairs Canada?

24                   MR. ROBERT JENKINS:   Robert Jenkins with  
25 INAC. We have no questions.

1 THE CHAIRPERSON: Okay, thank you. I'll  
2 go to the North Slave Metis Alliance.

3 MS. SHERYL GRIEVE: No questions.

4 THE CHAIRPERSON: Okay. Registered  
5 speakers?

6

7 (BRIEF PAUSE)

8

9 THE CHAIRPERSON: Go to the general  
10 public?

11

12 (BRIEF PAUSE)

13

14 THE CHAIRPERSON: Okay, we'll go to the  
15 Board staff, technical advisors and legal.

16

17 (BRIEF PAUSE)

18

19 MR. JAMIE VANGULCK: Thank you, Mr.  
20 Chair. I've a couple of questions.

21 Environment Canada had recommended target  
22 values for ammonia that were presented in your  
23 presentation, and just to clarify, that was 5 milligrams  
24 per litre for average concentrations and 10 milligrams  
25 per litre for maximum grab sample?

1 MS. ANNE WILSON: Anne Wilson, that's  
2 correct.

3 MR. JAMIE VANGULCK: Jamie Vangulck.  
4 Could you also please clarify what Environment Canada  
5 recommends for phosphorous levels?

6 MS. ANNE WILSON: Anne Wilson. I think  
7 if we start with the proposed one point-o (1.0) average  
8 and 2.0 milligrams per litre maximum grab we'll be making  
9 some good progress. They're going to be difficult to  
10 meet that.

11 THE CHAIRPERSON: Thank you. Further,  
12 Jamie?

13 MR. JAMIE VANGULCK: Thank you, Mr.  
14 Chair.

15 Environment Canada recommended a  
16 feasibility study on sludge removal. You mentioned this  
17 in your presentation. The City has commented on the  
18 adaptive technique to deciding if that feasibility study  
19 should be completed.

20 Is an adaptive process acceptable to  
21 Environment Canada?

22 MS. ANNE WILSON: Anne Wilson. I'm going  
23 to give you a qualified yes. I would not like to base my  
24 evaluation of the sludge situation on compliance at F3.  
25 I would suggest that F6, the stop log outflow, be

1 monitored and changes seen in the effluent at that point  
2 be used to trigger a better look at -- at what sludge  
3 management is needed.

4                   And, of course, they'll know if the lagoon  
5 is filling up, they can put somebody in the lagoon with a  
6 tester to see what the sludge depths are at that point.  
7 So I would bring it a little closer to the actual lagoon  
8 for monitoring and -- and looking at thresholds.

9                   THE CHAIRPERSON:    Okay, thank you, Anne.  
10 Jamie...?

11                   MR. JAMIE VANGULCK:    Thank you, Mr.  
12 Chair.   Just a follow-up on that to get some additional  
13 details.

14                   So at point F6, what specific  
15 recommendations would you include as a condition to  
16 assess if sludge removal is needed?

17                   You mentioned sludge depth measurement.  
18 Would there also be water quality measurements at that  
19 location, and if so, what?

20                   MS. ANNE WILSON:    It's Anne Wilson.  I  
21 think the first line of review would be what the effluent  
22 quality is at F6, and you would want to look at some of  
23 the parameters that were more associated with the sludge  
24 so you'd see if there were increases in the biological  
25 oxygen demand at that point.



1                   If you did see something like that, then  
2 it would be reasonable to look at testing the actual  
3 depth of the sludge in the lagoon upstream. There --  
4 there will probably be other ones that I can't bring to  
5 mind right now that would be good markers. We need to  
6 have a systems engineer for that.

7                   THE CHAIRPERSON:   Okay, thanks. Jamie,  
8 further?

9

10   (BRIEF PAUSE)

11

12                   MS. JENNIFER BAYLY-ATKIN:   Jennifer  
13 Bayly-Atkin. Would Environment Canada provide an  
14 undertaking to give its recommendations to the Board for  
15 thresholds that are used to determine when a feasibility  
16 study is required for sludge removal?

17                   MS. ANNE WILSON:   It's Anne Wilson. I  
18 can undertake to provide some general parameters and a  
19 range of numbers, and I will undertake to get these from  
20 our wastewater specialists. And you can just advise me  
21 of the time frame.

22                   THE CHAIRPERSON:   Okay, thank you, Anne.  
23 Then that's Undertaking Number 2.

24

25 --- UNDERTAKING NO. 2:           Environment Canada to give

1                   its recommendations to the  
2                   Board for thresholds that are  
3                   used to determine when a  
4                   feasibility study is required  
5                   for sludge removal  
6

7                   THE CHAIRPERSON:   And is there further,  
8                   Jamie?

9                   MR. JAMIE VANGULCK:   Thank you, Mr.  
10                  Chair.  A couple more questions, on a different topic  
11                  though.

12                  The Proponent recommended a 70 percent  
13                  survival rate for bioassay testing to be incorporated in  
14                  the water licence.

15                  What value for survival rate does  
16                  Environment Canada recommend?  Is the 70 percent  
17                  acceptable?  And I -- I noticed that in your presentation  
18                  you gave a range, so I guess we're looking for -- for a  
19                  specific number.

20                  MS. ANNE WILSON:   Anne Wilson.  70  
21                  percent would be acceptable.

22                  THE CHAIRPERSON:   Okay.  Thank you.  
23                  Jamie?

24                  MR. JAMIE VANGULCK:   Thank you, Mr.  
25                  Chair.

1                   There is currently no monitoring of water  
2 quality at the point of discharge from the contaminated  
3 soil treatment facility. Does Environment Canada  
4 recommend water quality testing at the point of discharge  
5 from the contaminated soil treatment facility?

6                   MS. ANNE WILSON: It's Anne Wilson. If  
7 the City is going to proceed with discharging it to the -  
8 - the wooded area adjacent to the facility we would  
9 support a requirement for testing. And I think this  
10 would be reasonable to be done prior to each discharge.

11                  THE CHAIRPERSON: Okay. Thank you.  
12 Further, Jamie?

13                  MR. JAMIE VANGULCK: Thank you, Mr.  
14 Chair.

15                  A follow-up: Could Environment Canada  
16 recommend what water quality parameters to test for that  
17 location?

18                  MS. ANNE WILSON: It's Anne Wilson. I  
19 think that will depend on what is being put into the  
20 contaminated soil facility. The -- my understanding is  
21 it's primarily hydrocarbons so, yeah, I'm -- are there  
22 not already criteria for hydrocarbon contaminated waters  
23 that the City has? Sorry, Mr. Chairman.

24                  THE CHAIRPERSON: Was that a question you  
25 had of the City?

1 MS. ANNE WILSON: It's Anne Wilson. Yes,  
2 I just wanted clarification on that because I think there  
3 might already be such standards.

4 THE CHAIRPERSON: City of Yellowknife?

5 MR. DENNIS KEFALAS: Thank you, Mr.  
6 Chair. Dennis Kefalas with the City of Yellowknife.

7 All water is actually tested before it is  
8 discharged on all these -- and this is all in an  
9 agreement that we have with the Board in terms of  
10 amendment that was made to our water licence.

11 In the past year, we've actually held onto  
12 this year's water because the arsenic levels are a little  
13 higher than what the current and allowable discharge rate  
14 is, which is somewhat -- I guess it -- its established on  
15 thresholds that don't really take into account the  
16 background levels here in Yellowknife.

17 So as part of our new -- and within the  
18 coming year that we'll be evaluating these background  
19 levels and looking for appropriate means of how to either  
20 treat or discharge the water that's currently held and  
21 hasn't been discharged this year.

22 In previous years we found the same thing  
23 has happened and we were allowed to discharge in one of  
24 the tailing ponds because of the increased arsenic levels  
25 which are slightly higher than what the parameters are

1 by, I think, 25 parts per billion and we're at about 35  
2 parts per billion.

3 But this has already been submitted to the  
4 Water Board in the past.

5 THE CHAIRPERSON: Okay. Thank you. Does  
6 that answer your question okay, Anne?

7 MS. ANNE WILSON: Anne Wilson. Yes, it  
8 does, thank you.

9 THE CHAIRPERSON: Okay. Thank you. Back  
10 to you then, Jamie.

11

12 (BRIEF PAUSE)

13

14 MR. JAMIE VANGULCK: Thank you, Mr.  
15 Chair. I'll move on to another question.

16 Environment Canada had recommended a study  
17 on the capabilities of the effluent discharge area from  
18 the containment of soil treatment facility to be  
19 completed.

20 When does Environment Canada believe a  
21 feasible time period is for completion of that study?

22 MS. ANNE WILSON: Anne Wilson. I think  
23 that will depend on whether or not it's going to be used  
24 for discharge. I would like -- I had hoped that that  
25 would be completed prior to any significant discharge to

1 the area, but my understanding is the City isn't -- is  
2 holding their -- is holding the liquid at this point.

3 THE CHAIRPERSON: Okay. Thank you. Did  
4 the City want to clarify that comment?

5 MR. DENNIS KEFALAS: Dennis Kefalas, City  
6 of Yellowknife. The water will be held and/or treated  
7 until it meets the current criteria for discharge or  
8 until such time as we can change the parameters for  
9 discharge of what we currently have treated.

10 Again, just to further -- I guess to  
11 clarify one of Anne Wilson's previous inquiries. All --  
12 all we accept at the landfill is hydrocarbon contaminated  
13 soil; we do not accept soil contaminated with heavy  
14 metals.

15 THE CHAIRPERSON: Thank you. Further to  
16 that? Okay, then Jamie.

17 MR. JAMIE VANGULCK: Thank you, Mr.  
18 Chair.

19 Environment Canada also recommended a  
20 study to understand metal concentrations in surface water  
21 in the vicinity of the solid waste facility. Could  
22 Environment Canada provide comment on an appropriate time  
23 period for completion of that study?

24 MS. ANNE WILSON: It's Anne Wilson. I  
25 think we would be satisfied with the proposed two (2) to

1 three (3) year time frame for doing the work and then  
2 reporting on it.

3 THE CHAIRPERSON: Okay, thanks.  
4 Jamie...?

5

6 (BRIEF PAUSE)

7

8 MR. JAMIE VANGULCK: That's all the  
9 questions I have at the moment, Mr. Chair.

10 THE CHAIRPERSON: Okay, thank you.  
11 Anything else from staff or legal? Jennifer...?

12 MS. JENNIFER BAYLY-ATKIN: Jennifer  
13 Bayly-Atkin. I just wanted to clarify for Undertaking  
14 Number 2; you had mentioned a time frame issue, would you  
15 be able to provide that within the one (1) week  
16 undertaking deadline? Is that enough time to do that in?  
17

18 MS. ANNE WILSON: It's Anne Wilson.  
19 It'll depend on the availability of the engineer that I'm  
20 hoping to ask. So can I let the Board know tomorrow on  
21 that? It should be okay, but unforeseen circumstances  
22 may be there.

23 MS. JENNIFER BAYLY-ATKIN: Thank you very  
24 much.

25 THE CHAIRPERSON: Okay, thank you then,

1 and I won't make that near-fatal mistake of forgetting my  
2 Board members here.

3 Sabet, do you have any questions of  
4 Environment Canada?

5 MS. ELIZABETH BISCAYE: Just one (1), Mr.  
6 Chair.

7 In your written intervention regarding the  
8 proposed changes to the new water licence, speaking about  
9 the operations and maintenance manual or plan, there's a  
10 comment made that the plan should be resubmitted for  
11 approval if there are significant changes.

12 Could you share with us what you would  
13 consider significant changes?

14 MS. ANNE WILSON: It's Anne Wilson. I  
15 think significant changes would include various changes  
16 in quantities or in practices. Without having really  
17 thought about that very much, anything that would change  
18 the risks, the receiving environment, change the loading  
19 to the sewage lagoon, for example, yeah, I'm sorry, I  
20 can't really think of any good examples.

21 THE CHAIRPERSON: Okay, thanks. Sabet,  
22 further?

23 MS. ELIZABETH BISCAYE: No further  
24 questions, thanks.

25 THE CHAIRPERSON: Okay, Pat Laroque...?



1 MR. PAT LAROQUE: No questions, Mr.  
2 Chair, thanks.

3 THE CHAIRPERSON: Okay. Floyd...?

4 MR. FLOYD ADLEM: I have no questions.

5 THE CHAIRPERSON: Okay, then, thank you,  
6 Anne. Very informative.

7 And we will then take a break, a fifteen  
8 (15) minute coffee break, thanks.

9  
10 --- Upon recessing at 2:56 p.m.

11 --- Upon resuming at 3:16 p.m.

12

13 THE CHAIRPERSON: Good afternoon. If we  
14 could have everybody start taking their seats, please,  
15 we'll get on with the process.

16

17 (BRIEF PAUSE)

18

19 THE CHAIRPERSON: Okay, thank you for  
20 being so diligent there in coming back.

21 Jamie, you had a point of clarification  
22 for Environment Canada?

23 MR. JAMIE VANGULCK: Yes, thank you, Mr.  
24 Chair.

25 In Environment Canada's intervention, it

1 does not mention the pass/fail test for bioassay testing,  
2 but in your response you did mention the pass/fail test  
3 for bioassay testing.

4 So could you please clarify what -- what  
5 the test method is that Environment Canada is  
6 recommending for -- for bioassay testing.

7 MS. ANNE WILSON: It's Anne Wilson. We  
8 do recommend the pass/fail bioassay test as opposed to  
9 the LC50. The pass/fail requires only one (1) sample,  
10 and it's a quick test with 100 percent effluent.

11 THE CHAIRPERSON: Okay, thank you. Does  
12 the City want to respond to Environment Canada?

13 MR. DENNIS KEFALAS: Thank you, Mr.  
14 Chair. Dennis Kefalas of the City of Yellowknife. We'll  
15 have that chance to review what the testing requires and  
16 the parameters involved in the testing before we can make  
17 a -- or before we can comment.

18 THE CHAIRPERSON: Okay. Jennifer, is  
19 there an undertaking here or what do you --

20 MS. JENNIFER BAYLY-ATKIN: Yeah, I think  
21 we would need an undertaking for the -- the City to  
22 provide that information. So can you -- can you repeat  
23 what you said just a moment ago, what you had to do  
24 before you could provide the information?

25 MR. DENNIS KEFALAS: Dennis Kefalas, City

1 of Yellowknife. Just to review the testing parameters  
2 then comment on it then at that time. So we could do  
3 that within the one (1) week period.

4 MS. JENNIFER BAYLY-ATKIN: Okay.  
5 Jennifer Bayly-Atkin. So the undertaking is to review  
6 the testing parameters and provide a response by the week  
7 deadline.

8 MR. DENNIS KEFALAS: Dennis Kefalas, City  
9 of Yellowknife. That's correct.

10 THE CHAIRPERSON: Okay. Thank you then,  
11 Jennifer. That'll be Undertaking Number 3.

12

13 --- UNDERTAKING NO. 3: City of Yellowknife to review  
14 the testing parameters and  
15 provide a response by the  
16 week deadline

17

18 THE CHAIRPERSON: And so we'll continue  
19 then with Intervenor presentation with GNWT-ENR. You can  
20 identify yourself and ask your questions, or make your  
21 presentation.

22

23 PRESENTATION BY GNWT-ENR:

24 MS. AILEEN STEVENS: Thank you, Mr.  
25 Chair. Aileen Stevens, with Environment Natural

1 Resources from the Environmental Protection Division.  
2 With me is Diep Duong also from EP, and Gerald Enns.  
3 Diep is the solid waste specialist and Gerald is the  
4 hazardous waste specialist with Environmental Protection.

5 Just a quick overview of our presentation.  
6 We're just going to go through ENR's mandate. We'll  
7 present a brief background of the course of events during  
8 this application and our recommendations and, of course,  
9 we'll follow up with questions.

10 So ENR's mandate is essentially to protect  
11 and enhance environmental quality in the Northwest  
12 Territories. And the idea is to ensure an equivalent  
13 level of environmental protection throughout the  
14 territory. Our comments on this proposal have to do with  
15 the solid waste facility so the Government of the  
16 Northwest Territories' or ENR's mandate to manage waste  
17 is derived from GNWT's Environmental Protection Act and  
18 the Wildlife Act.

19 Just to provide a brief background. When  
20 ENR reviewed the City's proposal, we provided our  
21 comments and recommendation to the Land and Water Board  
22 at the end of September and, after the City had reviewed  
23 our recommendations, there were some points of  
24 clarification required.

25 So we actually met with the City of

1 Yellowknife staff on November 24th to discuss some of our  
2 concerns. And essentially, we came to an agreement with  
3 the City on our recommendations. We subsequently wrote  
4 those down and submitted them to the Land and Water Board  
5 on November 27th and, subsequent to that, the City  
6 provided in writing to the Board, as well, their  
7 agreement to -- to our discussions. So the following is  
8 a brief overview of the agreed upon recommendations.

9           ENR's recommendations included leachate  
10 modelling and monitoring, discussions on the abandonment  
11 enclosure, management plans of the solid waste facility,  
12 hazardous waste and adaptive management.

13           So first off, with leachate modelling and  
14 monitoring, ENR had some concerns in the Application  
15 about incomplete geotechnical and hydrologic information.  
16 There seemed to be a lack of subsurface leachate  
17 monitoring. And we had some doubt whether the current  
18 SMP stations on the site were representative of surface  
19 runoff from the site.

20           Furthermore, the geophysical survey  
21 conducted by Dillon Consulting in the drainage study of  
22 the site indicated that further study would be required  
23 on subsurface seepage patterns including bedrock  
24 integrity and leachate characteristics. Now, when we say  
25 bedrock integrity we mean migration patterns of

1 fracturing not how it will hold up to an earthquake.

2           So our specific recommendations on  
3 leachate modelling and monitoring included -- we  
4 recommended subsurface water and leachate seepage  
5 patterns, preliminary leachate characterization and, to  
6 the extent of being reasonably feasible, the integrity of  
7 the bedrock should be investigated by the fall of 2011.

8           So within this, we specifically request  
9 that they determine subsurface topography at the solid  
10 waste facility to enable future modelling of the bedrock  
11 bowl in which the solid waste facility is located. We'd  
12 like that they characterize to the extent of being  
13 reasonably feasible the bedrock integrity, which includes  
14 the identification of permeability and/or fracturing.

15           Also to determine a water inflow and  
16 outflow budget of the facility, determine the  
17 applicability of existing SNP stations and recommend new  
18 stations if the study determines that the existing  
19 stations are not adequately placed to monitor quality and  
20 quantity of all surface water outpoints, as well as to  
21 establish a general understanding of the composition of  
22 leachate across the landfill. We acknowledge that this  
23 is an old landfill and there's likely all sorts of things  
24 buried in it that were not -- that have not necessarily  
25 been identified so the leachate characterization is

1 fairly important here.

2                   So ENR also recommends that a water and  
3 leachate modelling and monitoring plan be developed based  
4 on the studies recommended, and the City has agreed and  
5 committed to this.

6                   Our second point would be abandonment and  
7 closure. This has already been discussed throughout the  
8 Hearing so far, but ENR recommends that an abandonment  
9 and closure plan be developed that include the following  
10 components: leachate modelling and monitoring, which  
11 we've just discussed, and landfill gas monitoring. The  
12 City did undertake a landfill gas assessment in the past  
13 and so that's a good starting point. And so the annual  
14 reporting of the findings of the landfill gas monitoring  
15 plan and the leachate modelling and monitoring plan  
16 should also be conducted.

17                   Point 3 was management plans in general.  
18 ENR recommends that all management plans be updated by  
19 February of this year and submitted to the Land and Water  
20 Board for review and approval. The O&M manual should be  
21 updated by February 2010 to include and address bear  
22 fence maintenance and operations. And all management  
23 plans should be assessed annually and updated accordingly  
24 and submitted to the Board.

25                   With respect to hazardous waste, the solid

1 waste facility is currently accepting hazardous waste.  
2 So ENR recommends that a site-specific hazardous waste  
3 management plan be developed from twelve (12) months of  
4 issuance of the water licence, and, in developing this  
5 document, to consult with ENR and use the ENR's draft  
6 document titled "Developing a Community Hazardous Waste  
7 Management Plan" to assist in the undertaking.

8           And our final point involved adaptive  
9 management. ENR recommends that annual reports include a  
10 comparison of annual waste data to the projected lifespan  
11 of the landfill. We understand that the City already  
12 monitors and documents the amount and types of waster  
13 accepted at the landfill so we just request that they  
14 document this so that any modifications and updates can  
15 be made to the operations and maintenance of the  
16 facility.

17           And that was that. Thanks very much to  
18 the City for being willing to discuss that with us and to  
19 committing to those points. Are there any questions?  
20

21 QUESTION PERIOD:

22           THE CHAIRPERSON: Okay. Thank you for  
23 your presentation. Then we'll go to questions for ENR  
24 from the City of Yellowknife.

25           MR. DENNIS KEFALAS: Thank you, Mr.



1 Chair. Dennis Kefalas with the City of Yellowknife. The  
2 City of Yellowknife has no questions at this time.

3 THE CHAIRPERSON: Okay. Thank you.  
4 Environment Canada?

5 MS. JANE FITZGERALD: Jane Fitzgerald,  
6 Environment Canada. We have no questions.

7 THE CHAIRPERSON: Okay, thanks. INAC...?

8 MR. ROBERT JENKINS: Thank you, Mr.  
9 Chair. Robert Jenkins. No questions.

10 THE CHAIRPERSON: And the North Slave  
11 Metis Alliance?

12 MS. DANIELLE DE FIELDS: Danielle De  
13 Fields, North Slave Metis Alliance. We have no questions  
14 at this time.

15 THE CHAIRPERSON: Thank you. Anything --  
16 any registered speakers?

17 Okay. We'll go to the general public.

18 And Board staff, technical advisors, legal  
19 representation. Jamie...?

20 MR. JAMIE VANGULCK: Thank you, Mr.  
21 Chair. There is currently no monitoring of water quality  
22 at the point of discharge from the contaminated soil  
23 treatment facility.

24 Does ENR recommend water quality testing  
25 at the point of discharge from the contaminated soil

1 treatment facility?

2 MS. AILEEN STEVENS: ENR recommends that  
3 the site be assessed for surface runoff and subsurface  
4 runoff. If a technical working group were to be put  
5 together to address those types of specifics, that would  
6 probably be ideal.

7 THE CHAIRPERSON: Okay. Thanks. And for  
8 the record, if you could identify yourself for us.

9 MS. AILEEN STEVENS: Sorry. Aileen  
10 Stevens, ENR.

11 THE CHAIRPERSON: Thank you. Jamie...?

12 MR. JAMIE VANGULCK: Thank you, Mr.  
13 Chair. So, just a clarification. Your response partly  
14 was that the monitoring water quality be considered as  
15 part of your leachate monitoring study that you're  
16 recommending?

17 MS. AILEEN STEVENS: Aileen Stevens, with  
18 ENR. That could be considered part of the surface water  
19 study and leachate monitoring.

20 THE CHAIRPERSON: Thank you. Further,  
21 Jamie...?

22 MR. JAMIE VANGULCK: Thank you, Mr.  
23 Chair. Within ENR's November 27th, 2009 intervention, it  
24 was stated, quote:

25 "ENR has outstanding concerns regarding

1 environmental impacts stemming from  
2 leachate originating from the current  
3 solid waste disposal facility."

4 Could ENR provide evidence as to what  
5 environmental impacts they have observed?

6 MS. AILEEN STEVENS: Sorry -- Aileen  
7 Stevens -- Jamie, could you please repeat that?

8 MR. JAMIE VANGULCK: Jamie Vangulck. The  
9 -- the statement in the intervention said:

10 "ENR has outstanding concerns regarding  
11 environmental impacts stemming from  
12 leachate originating from the solid  
13 waste disposal facility."

14 So, there's a clarification question that  
15 the -- that is being asked here, is: What evidence of  
16 environment impacts does ENR have?

17 MS. AILEEN STEVENS: Aileen Stevens, with  
18 ENR. Our concern is with potential impacts from landfill  
19 leachate. It's understood that landfills generate  
20 leachate, and as a result they are potential contaminates  
21 to the environment. There's just no existing information  
22 currently for the site.

23 THE CHAIRPERSON: Okay. Thank you.  
24 Follow-up, Jamie...?

25 MR. JAMIE VANGULCK: Thank you, Mr.

1 Chair. I have a different line of questioning here.

2 ENR noted that submission of an A&R plan,  
3 or abandonment restoration plan, for the landfill should  
4 be longer than six (6) months prior to closure of the  
5 landfill to allow for an adequate technical review. When  
6 does ENR recommend submitting the Proponent submit an A&R  
7 plan so that they can complete an appropriate technical  
8 review?

9 MS. DIEP DUONG: Hi, this is Diep Duong  
10 with ENR. We feel that the abandonment and enclosure  
11 plan should actually be in place already, in conjunction  
12 with the initial design during the interim of the  
13 operations of the landfill, as well as the final closure.  
14 So, any time -- a lot sooner than six (6) months before  
15 closure of the current landfill is -- is requested.

16 THE CHAIRPERSON: Thanks. Follow-up,  
17 Jamie...?

18 MR. JAMIE VANGULCK: Thank you, Mr.  
19 Chair. Just a clarification on the question. Currently  
20 the -- the current water licence has a requirement to  
21 submit and A&R plan six (6) months prior to closure of  
22 the landfill, and in ENR's intervention it said six (6)  
23 months isn't long enough to complete a tech -- adequate  
24 technical review. Your response -- I'd just like you to  
25 -- to address that question, and then I've got a follow-

1 up on -- on your other response. So the -- the question  
2 is: How long in advance is needed to complete an adequate  
3 technical review of an A&R plan?

4

5 (BRIEF PAUSE)

6

7 MS. AILEEN STEVENS: Aileen Stevens, with  
8 ENR. The six (6) months was considered insufficient  
9 because there are so many other components of the A&R  
10 plan that would be required, including the leachate  
11 monitoring and modelling that we recommended, which takes  
12 time to -- to undertake. We can't specifically say how  
13 much time will be required, but, ideally, it would be  
14 longer than six (6) months, in the event that additional  
15 studies were required prior to closing the landfill, so  
16 that it doesn't hold up their projected closure date.  
17 That was the intention of the six (6) months comment.

18 But in terms of a specific amount of time,  
19 a year would be better, but this is in the interest of  
20 the City meeting their recommended closure time.

21 THE CHAIRPERSON: Okay, thank you. Does  
22 the City want to respond to that?

23 MR. DENNIS KEFALAS: Thank you, Mr.  
24 Chair. Dennis Kefalas, with the City of Yellowknife. I  
25 -- I guess people can take as long as they want to review

1 the banna -- A&R plan, in terms of -- I mean we'll start  
2 closing out the landfill. People think that we'll start  
3 doing it in 2011. Actually, because this is an active  
4 landfill and there'll be areas that will be -- have just  
5 been -- I guess, just -- areas that have just -- that --  
6 where we just finished working, it'll be around two (2)  
7 or three (3) years before we actually start putting the  
8 final cap on certain areas, because we don't want to go  
9 back and actually do work in the same area twice, so we  
10 have to allow two (2) to three (3) years of settlement in  
11 certain areas.

12                   As we go about and we keep depositing  
13 waste within the landfill, what we're trying to do is  
14 establish a -- the proper contouring to allow for proper  
15 surface runoff once it's properly capped. And, as part  
16 of this year's work, what we anticipate doing too, is to  
17 have like a pilot project with a capping design that  
18 we've submitted to the Board for review several years  
19 ago. And this summer there's an area that we haven't  
20 worked -- worked -- where there has been work -- any work  
21 been done for several years, so we plan on doing that  
22 this summer too.

23                   So in terms of review timeframes, if it's  
24 six (6) months or a year, it won't really have any impact  
25 on our final closure of -- of the landfill.

1 THE CHAIRPERSON: Okay, thank you. Did  
2 you have a response, for ENR?

3 MS. AILEEN STEVENS: Aileen Stevens. No.  
4 Thanks for the information. We do acknowledge it's a  
5 phased-in approach. But I guess we'll still maintain  
6 that the sooner the better. Thanks.

7 THE CHAIRPERSON: Okay. Follow-up,  
8 Jamie?

9

10 (BRIEF PAUSE)

11

12 MR. JAMIE VANGULCK: Thank you, Mr.  
13 Chair.

14

15 (BRIEF PAUSE)

16

17 MR. JAMIE VANGULCK: Could ENR clarify  
18 what they perceive to be submitted with an A&R plan? I  
19 guess, it is a final abandonment and restoration plan?

20 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
21 Yes, ideally, the abandonment reclamation plan would be a  
22 final plan, but we realize that it is a phased approach,  
23 so if it needed to be modified as they went, then that  
24 would be expected.

25 THE CHAIRPERSON: Thank you. Follow-up

1 then, Jamie?

2 MR. JAMIE VANGULCK: Thank you, Mr.  
3 Chair. I'll move on to another question. Does ENR have  
4 a recommendation on whether or not runoff from the snow  
5 disposal area should be managed and monitored?

6 MR. AILEEN STEVENS: Aileen Stevens. We  
7 would expect that the snow disposal area would be  
8 considered part of the solid waste facility site and  
9 would be included in part of the surface runoff and  
10 subsurface runoff study.

11 THE CHAIRPERSON: Okay, thank you.  
12 Further...?

13

14 (BRIEF PAUSE)

15

16 MR. JAMIE VANGULCK: Thank you, Mr.  
17 Chair. Just a follow-up clarification. There are snow  
18 disposal areas outside of the solid waste facility.  
19 Could ENR comment on the need to manage dis -- discharge  
20 waters from -- or drainage waters from the snow disposal  
21 areas outside of the landfill area?

22

23 (BRIEF PAUSE)

24

25 MR. GERALD ENNS: It's Gerald Enns, here



1 with ENR. With respect to snow disposal, it's not a  
2 issue that ENR has previously identified. For snow  
3 disposal sites on Commissioner's lands outside of the  
4 landfill, ENR does have industrial discharge criteria  
5 which would apply for snow accumulated at these sites.  
6 We could consider -- we could begin to consider a  
7 sampling regime that could test the snow disposal, test  
8 the snow and the runoff, and establish some baseline to  
9 see if it is actually an area of concern.

10 THE CHAIRPERSON: City, care to respond  
11 to Commissioner's Lands within the city limits.

12 MR. DENNIS KEFALAS: Thank you, Mr.  
13 Chair. Dennis Kefalas, of the City. I think the only  
14 concerns we have is that the City is not really in the  
15 job of enforcing clean-ups when we're talking about  
16 spills. And essentially -- I mean, the snow is  
17 relatively uncontaminated unless there is a spill.

18 So unless we can have a -- we will -- we --  
19 - we could actually -- we'll agree to do sampling of  
20 these landfills, but with the understanding that we have  
21 to have some guarantees from the GNWT that they will be  
22 enforcing any spills and any possible contamination that  
23 we're not responsible for, in terms of, I guess, any oil  
24 spills or gasoline spills that may affect the quality of  
25 snow that enters these landfills.

1 THE CHAIRPERSON: Okay, thanks for that  
2 clarification. Does ENR want to respond or give us an  
3 Undertaking?

4

5 (BRIEF PAUSE)

6 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
7 If it turns out to be a problem, we will discuss it with  
8 the City.

9 THE CHAIRPERSON: Okay, thank you.  
10 Jennifer, any concerns with that?

11 MS. JENNIFER BAYLY-ATKINS: Not at this  
12 time, Mr. Chair. Thank you.

13 THE CHAIRPERSON: Thank you. Jamie,  
14 follow-up?

15 MR. JAMIE VANGULCK: Yes, thank you, Mr.  
16 Chair. Just a follow-up from that. Does ENR recommend  
17 monitoring of runoff water from the snow disposal areas?

18

19 (BRIEF PAUSE)

20

21 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
22 Yes, we do. Thanks.

23 THE CHAIRPERSON: Okay. Any responses  
24 for the City for monitoring of snow fills?

25 MR. DENNIS KEFALAS: Thank you, Mr.

1 Chair. Dennis Kefalas with the City of Yellowknife. I  
2 think part of the snow dumps, we can establish a -- I  
3 guess, location points like the ones in Kam Lake. And  
4 part of our further studies will establish the  
5 appropriate sample points around the landfill, which will  
6 include the -- the snow dumps adjacent to the landfill.

7 THE CHAIRPERSON: Okay. Thanks for that.  
8 Follow-up, Jamie...?

9 MR. JAMIE VANGULCK: Thank you, Mr.  
10 Chair. Are there specific water quality parameters that  
11 should be measured in the run-off waters from the snow  
12 disposal areas, and could ENR provide a recommendation as  
13 to what to test?

14 MS. AILEEN STEVENS: Aileen Stevens, with  
15 ENR. We're not prepared to -- to discuss these points at  
16 this time, but we're definitely interested in discussing  
17 this with the City.

18 THE CHAIRPERSON: Okay. Jennifer, any  
19 problems with that?

20 MS. JENNIFER BAYLY-ATKIN: Jennifer  
21 Bayly-Atkin. Is this -- I'm addressing this to ENR. Is  
22 this something that you could undertake to do within the  
23 week following the Hearing and -- and get back to the  
24 Board with results? Or is this something that would take  
25 longer than that week of -- week's time, in which case

1 would need a longer undertaking, or an undertaking to  
2 provide some kind of recommendation for the study itself  
3 or the -- or the plan?

4

5 (BRIEF PAUSE)

6

7 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
8 More than a week would be requested to discuss this. I  
9 don't believe this was part of our intervention, the snow  
10 dumps outside of the solid waste facility, so this is  
11 something that we'd require more time for to provide  
12 input.

13 THE CHAIRPERSON: You have any further  
14 response, Jennifer?

15

16 (BRIEF PAUSE)

17

18 MS. JENNIFER BAYLY-ATKIN: A question for  
19 the City, Mr. Chair. Jennifer Bayly-Atkin here. Is this  
20 something that the City could undertake to address in its  
21 storm water management plan?

22 MR. DENNIS KEFALAS: Thank you, Mr.  
23 Chair. A point of protocol: I thought we weren't allowed  
24 to bring any new information to the table during these  
25 meetings. And as such, the only problem we have is if --

1 if you just put out a sam -- like, we would have agreed  
2 to just sampling and determine what consti -- what  
3 elements are included in the storm water -- or snow melt  
4 runoff, however, some of these standards that set, are  
5 considered Canadian standards, can't really be applied to  
6 the City; you know, like given the background elevations  
7 of arsenic and other heavy metals within the area.

8 ENR has adopted other -- or more less  
9 stringent guidelines than what's accepted in the rest of  
10 Canada for soil, concentrations of arsenic. And we've  
11 been hoping to -- that studies will be completed, not  
12 necessarily by the City because we do -- we are somewhat  
13 -- like we're -- our -- our budget's extremely tight and  
14 some of these studies maybe should be taken -- undertaken  
15 by other levels of Government to determine these  
16 background levels of trace elements within the  
17 surrounding environment of Yellowknife.

18 THE CHAIRPERSON: Thank you. And your  
19 point is absolutely correct. The new evidence cannot be  
20 introduced. We would not take it in, and that is why I  
21 drew Jennifer into it.

22 And, Jennifer, do you have a response? It  
23 looks like new evidence, to myself.

24 MS. JENNIFER BAYLY-ATKIN: Jennifer  
25 Bayly-Atkin here. You're right. I do agree that it is

1 new evidence and unfair to put to the City at this point.

2 THE CHAIRPERSON: Okay, so I take it then  
3 that ENR and the City will discuss this outside of what  
4 we will bring in as evidence. And whatever you arrive  
5 at, I guess you can write us a letter. Thank you.

6 MS. AILEEN STEVENS: Aileen Stevens.  
7 Yes, thanks.

8 THE CHAIRPERSON: Further, Jamie...?

9 MR. JAMIE VANGULCK: Yes, Mr. Chair, just  
10 one (1) last question.

11 With consideration given to the  
12 information that will be submitted to the Mackenzie  
13 Valley Land and Water Board from the Proponent during the  
14 term of this water licence, what licence term does ENR  
15 recommend for the new water licence?

16 MS. AILEEN STEVENS: Aileen Stevens.  
17 Historically, we have recommended that less than ten (10)  
18 years would be the time frame for water licences.

19 THE CHAIRPERSON: Okay, thank you. Is  
20 that the end of your questions there? Then we'll go to  
21 our Board members. Sabet...?

22 MS. ELIZABETH BISCAYE: No questions, Mr.  
23 Chair.

24 THE CHAIRPERSON: Thank you. Patrick...?

25 MR. PATRICK LACROQUE: No questions, Mr.

1 Chair. Thank you.

2 THE CHAIRPERSON: Thanks. Floyd...?

3 MR. FLOYD ADLEM: No questions.

4 THE CHAIRPERSON: Okay, great. Thank you  
5 for your presentation. You handled yourselves very well  
6 with some pretty tough questions, and you had very good  
7 information, thank you.

8 MS. AILEEN STEVENS: Thank you, Mr.  
9 Chair.

10 THE CHAIRPERSON: Where are we here?  
11 Okay. Okay, then we'll go to our next Intervenor  
12 presentation, Indian and Northern Affairs Canada. And if  
13 you could just identify yourself for the record. Thank  
14 you.

15

16 PRESENTATION BY INDIAN AND NORTHERN AFFAIRS CANADA:

17 MR. ROBERT JENKINS: Thank you, Mr.

18 Chair. My name's Robert Jenkins. I'm with the Water  
19 Resources Division of Indian and Northern Affairs Canada.

20 To my left I have Ms. Catherine Mallet,  
21 also with the Water Resources Division. To her left I  
22 have Mr. Scott Stewart. He's a water resource officer  
23 with the South Mackenzie district.

24 So today I'll be presenting INAC's  
25 intervention on the City's Type A water licence

1 application. So just a quick overview. We're going to  
2 walk through the technical issues that were identified by  
3 INAC and provide our sixteen (16) recommendations in  
4 response to these issues.

5 We've grouped these recommendations under  
6 three (3) themes, wastewater management, solid waste  
7 facility, stormwater management. And after that I'll  
8 close with some concluding remarks.

9 I'd like to warn you, Mr. Chair, that I  
10 practised this presentation with my son and he fell  
11 asleep.

12 THE CHAIRPERSON: We'll take that into  
13 consideration and I'll check my Board members from time  
14 to time.

15 MR. ROBERT JENKINS: So our first issue  
16 is associated with the holding capacity of Fiddler's Lake  
17 treatment system. The report titled "Expansion of  
18 Fiddler's Lagoon Treatment System Plan" was submitted by  
19 the City with the water licence application.

20 The report describes how an increasing  
21 City population is resulting in increased sewage  
22 production which is subsequently decreasing the holding  
23 capacity of the lagoon.

24 In the future, it is projected that the  
25 decanting season will commence earlier in the operating



1 year, limiting the effectiveness of treatment in both the  
2 lagoon and wetland.

3                   To maintain the current level of  
4 treatment, both the holding lagoon and wetland would  
5 require volume expansion as the population grows in order  
6 to ensure that the decanting season does not start  
7 earlier than September.

8                   In order to meet future effluent limits,  
9 the report explained that the level of treatment in the  
10 lagoon system must be improved. The report recommended  
11 that two (2) studies be conducted: One, cold weather  
12 wetland performance; and two, lagoon pre-treatments.

13                   INAC recommends that the City provide a  
14 revised Fiddler's Lake Treatment System Plan. The Plan  
15 would include, at a minimum, how the City will upgrade  
16 the Fiddler's Lake treatment system to accommodate  
17 projected future increases in wastewater volume. This  
18 could include committing to recommendations described in  
19 the Expansion of Fiddler's Lagoon Treatment System Plan  
20 which included a wetland study and pretreatment pilot  
21 study or a rationale for considering other options.

22                   Our next two (2) issues are in regards to  
23 performance of the municipal treatment system. The pH at  
24 SNP 0032-F3 has exceeded the pH range required in a water  
25 licence on several occasions.

1                   During recent technical sessions held by  
2 the Board, the City stated that high pH at F3 occurs  
3 during the summer period and is associated with the  
4 presence of an algal bloom. Details on the factors  
5 contributing to the generation of this algal bloom have  
6 not been provided.

7                   INAC is concerned with the elevated pH  
8 values observed at SNP 0032-F3. And we recommend that  
9 the City provide information on the factors that  
10 contribute to the seasonal generation of an algal bloom  
11 at F3.

12                   Subsequently, the City should evaluate  
13 mitigative measures which could be undertaken to reduce  
14 the presence of the algal bloom and the associated  
15 elevated pH.

16                   Recommendation 3, Sewage Effluent  
17 Characterization. INAC supports the City's proposal to  
18 perform a full year characterization of the Fiddler's  
19 Lagoon sewage effluent according to the CCME strategy.  
20 INAC understands that the City has committed to  
21 performing a full year effluent characterization in 2011,  
22 and commends the City for committing to undertake this  
23 initiative.

24                   INAC recommends that the water licence  
25 contain a requirement to perform a full year

1 characterization of effluent according to the CCME  
2 strategy and submit to the Board a final report following  
3 completion of that study.

4 Our fourth issue is in regards to  
5 contingency planning. In 2009 a leak was observed at the  
6 municipal sewage lagoon. INAC requested that a spill  
7 report, as well as a follow-up report be submitted.

8 INAC recommends that the Spill Contingency  
9 Plan be updated to include an action plan to mitigate  
10 effects from leaks or spills at the lagoon. The updated  
11 plan should conform to INAC's guidelines for spill  
12 contingency planning, and should be submitted to the  
13 Board for review and approval.

14 Our next issue relating to wastewater  
15 management is in regards to the location of the  
16 compliance point at F3. The City was suggesting that the  
17 end-of-pipe compliance point for the municipal wastewater  
18 system be located 100 metres from Great Slave Lake to  
19 conform with CCME guidance.

20 INAC did not agree that Great Slave Lake  
21 was the receiving water body from the City's treatment  
22 system. INAC maintained that the compliance point should  
23 remain at F3. In response, the City stated it would not  
24 apply for a relocation of the compliance point from F3.

25 INAC recommends that the compliance point

1 remain at F3. If the City feels it should be changed in  
2 the future, an amendment of the water licence will be  
3 required and further study should be undertaken to  
4 determine the extent and performance of the municipal  
5 wastewater treatment system.

6 Our last issue and associated  
7 recommendation under Wastewater Management is in regards  
8 to sampling requirements. The City currently tests for  
9 biological oxygen demand at Stations F1 and F3. The City  
10 previously requested that the Board decide whether  
11 biological oxygen demand or carbonaceous biological  
12 oxygen demand be tested within the renewed licence.

13 INAC suggested that both parameters be  
14 sampled by the City. This would maintain the existing  
15 long term BOD data set collected by the City but also  
16 have a period of overlap with the COB -- CBOD analysis  
17 enabling the creation of a relationship between the two  
18 (2) parameters.

19 INAC recommends that CBOD and BOD be  
20 tested for a minimum of three (3) years. After three (3)  
21 years it is recommended that the City provides a trend  
22 analysis of the data collected for review and approval by  
23 the Board. At that time, the sampling requirements could  
24 be revisited.

25 So I'll now discuss INAC's nine (9)

1 recommendations relating to the solid waste facility.

2 Our first issue relates to surface water sampling.

3 INAC believes that the SNP requirements  
4 associated with the solid waste facility should be  
5 revisited to reflect potential locations where runoff  
6 from the facility may occur.

7 INAC recommends that the location of SNP  
8 32-13 should be revisited considering the drainage from  
9 the snow dump. The relocation should be assessed in  
10 conjunction with the INAC inspector.

11 INAC also recommends that monitoring  
12 station 32-15 be relocated to the westside of Highway  
13 Number 4 to limit the influence of roadway runoff on  
14 sampling results as recommended in the drainage study  
15 conducted by the City.

16 Our next two (2) recommendations relate to  
17 the composting facility. The first is specific to record  
18 keeping. The City is currently recording the quantity of  
19 organics received at the compost facility and we'll also  
20 be recording the amount of compost produced and/or  
21 distributed. The City is committed to including this  
22 information in the annual water licence report.

23 INAC recommends that this commitment be  
24 formalized within the terms and conditions of the water  
25 licence.

1 Recommendation 10, leachate at the  
2 composting facility. The City has stated that all  
3 collected water including leachate from the compost  
4 facility is tested before discharging it to the lagoon.

5 INAC recommends that all water collected  
6 at the composting facility be sampled prior to discharge  
7 regardless of disposal location.

8 A SNP monitoring location should be  
9 established within the water licence and results  
10 submitted within the annual report.

11 Our fourth issue and recommendation with  
12 respect to the solid waste facility is in regards to  
13 groundwater leachate monitoring.

14 INAC believes that characterizing the  
15 subsurface drainage patterns at the current solid waste  
16 disposal facility is imperative to proper closure of the  
17 site.

18 INAC recommends that subsurface seepage  
19 patterns, leachate characterizations and integrity of the  
20 bedrock fracturing be investigated at the site.

21 Based on these investigations, a leachate  
22 modelling and monitoring plan should be developed. This  
23 plan should include subsurface leachate modelling,  
24 recommended subsurface monitoring locations, leachate  
25 management and monitoring after closure.

1                   INAC recommends that a leachate modelling  
2 and monitoring plan be submitted to the Board for review  
3 and approval. Following approval, INAC recommends that  
4 additional SNP monitoring locations be determined for  
5 subsurface drainage and incorporated in the water  
6 licence.

7                   Recommendation 12. Contaminated soils  
8 management. The City has been operating a contaminated  
9 soil facility since 2007. An INAC inspection report in  
10 2008 indicated that the volume of contaminated soil  
11 received had exceeded the capacity of the asphalt  
12 treatment pad.

13                   While runoff water from the pile on the  
14 pad is collected and treated at the landfill water  
15 treatment plant, the runoff from additional contaminated  
16 soil stored beside the asphalt pad would potentially  
17 migrate into the landfill.

18                   At the technical sessions held by the  
19 Board, the City identified that additional capacity have  
20 been constructed. INAC is pleased that the City has  
21 addressed this apparent lack of storage.

22                   INAC understands that leachate from the  
23 facilities collected and should it meet acceptable  
24 criteria is discharged from the facility to the  
25 surrounding environment. Should leachate not be

1 acceptable for release, it is stored onsite.

2 INAC recommends that the City update its  
3 O&M manual to include the operation of the contaminated  
4 soil treatment facility. The plan should include how the  
5 City will manage future increases in soil volume; how  
6 leachate will be tested and analyzed; how results will be  
7 reported and how leachate will be discharged or stored.

8 Mr. Chair, we've got three (3) more  
9 recommendations with respect to the solid waste facility.  
10 The first is with respect to closure and reclamation.

11 INAC believes that the development of a  
12 closure and reclamation plan is an important aspect of  
13 any undertaking as it defines how reclamation or  
14 remediation of the site will be achieved.

15 Throughout the lifespan of a project there  
16 are three (3) stages of development of a closure and  
17 reclamation plan. There's a preliminary closure and  
18 reclamation plan, otherwise known as a conceptual plan.  
19 Interim closure and reclamation plan and a final closure  
20 and reclamation plan.

21 INAC recommends that the City submit a  
22 closure and reclamation plan for review and approval  
23 before closure of the solid waste facility. The plan  
24 should include detailed information regarding the  
25 upcoming reclamation of the existing cell, as well as



1 preliminary/conceptual information for the new landfill  
2 cell.

3                   The plan should also include how leachate,  
4 surface and subsurface runoff will be monitored and  
5 modelled during and after closure as described in the  
6 solid waste facility drainage study.

7                   Recommendations 14 and 15 are with respect  
8 to the new solid waste facility. The City submitted a  
9 new solid waste facility preliminary design report along  
10 with the application. In the report, it suggests the  
11 quarry area to the north of the existing landfill be  
12 identified as the location for the new landfill. The new  
13 landfill is designed with liner and leachate collection.  
14 INAC is pleased to see the City being proactive in  
15 designing a proper landfill.

16                   INAC recommends that the City submits the  
17 final construction designs of the new landfill. These  
18 designs, which are to be approved by an engineer, should  
19 be submitted to the Board for review and approval.

20                   Recommendation 15: Operation and  
21 Maintenance Plan. Defined operation and maintenance  
22 procedures at the new solid waste facility will  
23 contribute to successful operation of the site by City  
24 personnel.

25                   INAC feels the plan should include details

1 on analytical testing, collection and treatment of  
2 leachate from the site. In addition, INAC stresses the  
3 importance of defining routine inspection schedules and  
4 associated maintenance of infrastructure, in particular,  
5 the liner and leachate collection system.

6 INAC recommends that the City submit an  
7 O&M plan for review and approval prior to the  
8 commencement of operations at the new landfill. The O&M  
9 plan should include, but not be limited to, leachate  
10 monitoring and treatment and liner maintenance and  
11 inspections.

12 Mr. Chair, our last recommendation is in  
13 regards to stormwater management. The Municipal  
14 Stormwater Management Plan was submitted to the Board in  
15 December of 2008 and, again, as a revised version in  
16 April 2009. The plan, as a whole, has not yet been  
17 approved by the Board and the City has been asked to  
18 address all technical reviewers' comments and concerns.

19 The City is committed to provide an  
20 updated version of the plan in February 2010, which shall  
21 be submitted to you and approved by the Board.

22 Indian and Northern Affairs Canada  
23 recommends that the City update its Municipal Stormwater  
24 Management Plan to address all technical reviewer  
25 concerns raised during the 2009 review. The updated plan

1 should be submitted to the Board for review and approval.

2                   So, Mr. Chair, in conclusion, INAC would  
3 like to commend the City for actively discussing our  
4 technical concerns and reach an agreement on our  
5 recommendations to the Board. The City in its letter to  
6 the Board on January 7th agreed to all of INAC's sixteen  
7 (16) recommendations.

8                   INAC respectfully submits to the Board  
9 that all its recommendations be included within the terms  
10 and conditions of the water licence.

11

12                   (BRIEF PAUSE)

13

14                   MR. JENKINS: Mr. Chair, thank you for  
15 the opportunity to speak today, and we're open to any  
16 questions that the Board or other parties may have.

17                   THE CHAIRPERSON: Thank you very much.  
18 Very impressive presentation, and I was wide awake, so...  
19 I guess I just want to clarify one (1) point, Anne, for  
20 my memory here, a lapse. Did we accept the 2009 storm  
21 effluent monitoring program? I thought we had sent it  
22 back with some clarification.

23

24                   (BRIEF PAUSE)

25

1 MR. DENNIS KEFALAS: Excuse me, Mr.  
2 Chair. We might be able to answer that question.

3 THE CHAIRPERSON: Yes, please do.

4 MR. DENNIS KEFALAS: Dennis Kefalas, City  
5 of Yellowknife. I believe the Board has accepted our  
6 sampling program, but not our storm water management  
7 plan, which we'll be resubmitting on -- in February 2010.

8 THE CHAIRPERSON: Okay. Yeah, that's I  
9 believe to be correct. Disregard that question, Anne.

10 Okay. So then we will go then to  
11 questions from the City of Yellowknife.

12

13 QUESTION PERIOD:

14 MR. DENNIS KEFALAS: Thank you, Mr.  
15 Chair. Dennis Kefalas, City of Yellowknife. The City  
16 has no questions at this time.

17 THE CHAIRPERSON: Thank you. From  
18 Environment Canada?

19 MS. JANE FITZGERALD: Jane Fitzgerald,  
20 Environment Canada. We have no questions.

21 THE CHAIRPERSON: From NWT-ENR...?

22 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
23 We have no questions, thanks.

24 THE CHAIRPERSON: Thank you. North Slave  
25 Metis Alliance...?

1 MS. SHERYL GRIEVE: No question. No  
2 questions, thank you.

3 THE CHAIRPERSON: Okay, thanks.  
4 Registered speakers...?

5 Questions from the general public...?

6 Then we'll go to Board staff, technical  
7 advisors, and/or legal representation. Jamie...?

8 MR. JAMIE VANGULCK: Thank you, Mr.  
9 Chair. INAC recommended a revised Fiddler's Lake  
10 treatment system plan for the sewage disposal facility.  
11 The Proponent has agreed to complete this plan.

12 Could INAC provide perspective on the time  
13 frame needed to complete the revised plan and a  
14 recommendation on when this plan should be submitted to  
15 the Water Board?

16

17 (BRIEF PAUSE)

18

19 MR. ROBERT JENKINS: Mr. Chair, it's  
20 Robert Jenkins. I guess it's a bit of a difficult  
21 question to respond to timing for a -- for a plan. I  
22 guess it depends on sort of the level of detail which is  
23 -- which is required.

24 This plan is -- is -- we've asked them to  
25 look at how they will accommodate projected future

1 increases in wastewater volume and I know that the City  
2 has looked at that issue, so that is something that they  
3 could probably come back to quite timely. I guess I'm a  
4 little hesitant in -- in setting a time frame for someone  
5 else, or proposing a time frame for someone else, on  
6 things such as a wetland study and a pretreatment pilot  
7 study.

8 So I'm not really answering your question,  
9 and I don't know if that's something you're okay with,  
10 but I think I'm going to stop there.

11 THE CHAIRPERSON: Okay. Thanks. Jamie,  
12 did you want to have further on that?

13

14 (BRIEF PAUSE)

15

16 MR. JAMIE VANGULCK: Thank you, Mr.  
17 Chair. I'll move on to another question.

18 INAC recommended a sewage effluent study  
19 according to CCME 2009 wastewater treatment strategy.  
20 The Proponent has agreed to complete this study in the  
21 year 2011.

22 Could INAC provide perspective on the time  
23 frame needed to complete the report on the study, and  
24 when it could be submitted to the Water Board?

25 MR. ROBERT JENKINS: Mr. Chair, it's

1 Robert Jenkins again. Yeah, the City has committed to  
2 undertaking that study, as far as we understand, in 2011.  
3 So assuming that we give them the full year to undertake  
4 that study, probably finish up their sampling in late  
5 fall, early winter, they'll need some time to analyse the  
6 results. I would say probably 2012 mid-year would  
7 probably be a reasonable time frame.

8 THE CHAIRPERSON: Thanks. Jamie...?

9 MR. JAMIE VANGULCK: Thank you, Mr.  
10 Chair. I got another time frame question for you here.  
11 INAC recommended a three (3) year study to develop the  
12 trend between CBOD and BOD. The Proponent has agreed to  
13 complete this study.

14 Could INAC provide perspective on the time  
15 frame needed to complete this report, and when it could  
16 be submitted to the Mackenzie Valley Land and Water  
17 Board?

18 MR. ROBERT JENKINS: It's Robert Jenkins  
19 with INAC. So, I mean, following its -- you know, it's a  
20 three (3) year study so -- so, obviously, they won't have  
21 their data collected until after three (3) years' time.

22 As I understand it, it's not an  
23 overwhelming task to compare BOD and CBOD and to -- to  
24 conduct a trend analysis to -- to derive a, what they  
25 call, sort of a ratio between the two (2) parameters. So

1 again I would -- I would, you know, think that that's  
2 something that City would probably be able to achieve  
3 within six (6) months at the end of the three (3) years.

4 THE CHAIRPERSON: Thanks. Follow-up...?

5 MR. JAMIE VANGULCK: Thank you, Mr.  
6 Chair. I'll move on to another question.

7

8 (BRIEF PAUSE)

9

10 MR. JAMIE VANGULCK: I'll start asking a  
11 few questions about the solid waste facility. And INAC  
12 recommended monitoring water from the compost facility  
13 prior to discharge.

14 Could INAC recommend the water quality  
15 parameters and frequency of measurement from this  
16 location?

17 MR. ROBERT JENKINS: Mr. Chair, it's  
18 Robert Jenkins. I think the frequency would depend on --  
19 on whether or not the -- the leachate actually gets  
20 released or deposited to the lagoon. As we understand  
21 it, most, if not all, of the leachate actually gets  
22 reapplied to the pile. So in that instance we're not  
23 recommending that sampling be required.

24 So I guess the frequency question would be  
25 subject to it being discharged to the lagoon, so sampled



1 before it goes to the lagoon. So the frequency is  
2 variable, but could be defined in the licence as such.

3                   The parameters, you know, not knowing  
4 what's -- what is exactly in it right now you -- you'd  
5 have to perform sort of a characterization of the  
6 leachate. You know, you'd have to do a -- a -- some  
7 sampling of the leachate for -- for different things,  
8 potentially metals, and sort of see what's -- what's in  
9 it, until you could fully define sort of a regular  
10 analytical testing regime.

11                   THE CHAIRPERSON: Okay, thanks. Did you  
12 say that was your last question, Jamie, or do you have a  
13 follow-up?

14                   MR. JAMIE VANGULCK: Thank you, Mr.  
15 Chair, I've got a couple more -- couple more questions.

16                   There is currently no monitoring of water  
17 quality at the point of discharge from the contaminated  
18 soil treatment facility. Does INAC recommend water  
19 quality testing at the point of discharge from the  
20 contaminated soil treatment facility?

21

22                   (BRIEF PAUSE)

23

24                   MR. ROBERT JENKINS: Mr. Chair, it's  
25 Robert Jenkins. As we understand it, the City does

1 monitor any water which gets released from the  
2 contaminated soils treatment facility. But that being  
3 said, I don't believe it is a requirement within the  
4 licence and I guess that's a point of clarification I'd  
5 throw back.

6 THE CHAIRPERSON: Followup, Jamie...?

7 MR. JAMIE VANGULCK: Thank you, Mr.  
8 Chair.

9 Yes, when -- when I say there's no  
10 requirement or no -- no monitoring being completed,  
11 that's with reference to the water licence.

12 MR. ROBERT JENKINS: It's Robert Jenkins.  
13 Thank you for that.

14 So they do conduct sampling now,  
15 analytical testing of the -- anything that's released  
16 from the contaminated soils facility and they do have  
17 criteria established internally, which we feel are pretty  
18 stringent, before they would release that to the  
19 surrounding environment. Parameters that would be  
20 sampled there, I mean, this is a -- largely, as we  
21 understand, a hydrocarbon contaminated soil, so there  
22 would be parameters such as total petroleum hydrocarbons,  
23 BTEX, these sort of things.

24 THE CHAIRPERSON: Thanks. Further...?

25 MR. JAMIE VANGULCK: Thank you. I've got

1 a follow-up question.

2 Does INAC recommend there be water licence  
3 condition for monitoring of the contaminated soil  
4 treatment facility and criteria for discharge?

5 MR. ROBERT JENKINS: I think INAC -- it's  
6 Robert Jenkins with INAC. I think that the City is  
7 already conducting that analysis and they're being  
8 diligent in that regard.

9 Putting it in a water licence is merely  
10 formalizing something which is done, so I think that that  
11 is something that I wouldn't argue, I'd agree with, that  
12 it could be put in the water licence. I'm not sure if --  
13 if the Board would decide that that would be a regulated  
14 criteria or simply a monitoring point. At this point in  
15 time, it's -- it's a monitoring point I think until  
16 perhaps there's a bit of a characterization done on what  
17 is actually being released there. It would be difficult  
18 to -- to establish site-specific criteria at least.

19 THE CHAIRPERSON: Okay. Thank you.  
20 Followup, Jamie...?

21 MR. JAMIE VANGULCK: Thank you, Mr.  
22 Chair. I have a different line of questioning.

23 This is with regards to INAC's  
24 Recommendation 13 about closure and reclamation plans.  
25 Your recommendation in the first sentence states:

1 "INAC recommends that the City submit a  
2 closure and reclamation plan for review  
3 and approval before the closure of the  
4 solid waste facility."

5 Could INAC define what they mean by the  
6 solid waste facility? Does that include the components  
7 of infrastructure around the landfill cells, as well as  
8 the landfill cell?

9 MR. ROBERT JENKINS: It's Robert Jenkins  
10 with INAC. Yeah, this -- this -- the wording here is a  
11 little -- could be a little confusing. We've got a  
12 current or existing cell, we've also got a new cell.

13 Our recommendation is that there be a  
14 closure reclamation plan for the site. So it's -- it's  
15 one (1) plan. There's different areas of the facility  
16 that -- that are in different stages of closure. So the  
17 existing cell as we've heard today is -- is -- you know,  
18 closure is within the next year or two (2), potentially.

19 So within the closure plan the City will  
20 have to provide some -- some very specific details on --  
21 on those areas of the facility, so the existing cell, but  
22 also within that plan, they would need details on the new  
23 cell from a -- from what could be included in a  
24 preliminary closure plan. So very conceptual thinking  
25 about closing the new cell.

1                   So this could all be included within --  
2 within one (1) plan for the water licence, but the level  
3 of detail for different areas would be different.

4                   THE CHAIRPERSON:   Thank you.  Further,  
5 Jamie...?

6                   MR. JAMIE VANGULCK:   Thank you, Mr.  
7 Chair.  A follow-up question to that.

8                   When does INAC recommend submission of the  
9 closure and reclamation plan for the solid waste  
10 facility?

11                  MR. ROBERT JENKINS:   It's Robert Jenkins  
12 with INAC.  Well, I mean, I guess that sort of depends on  
13 when the City ultimately decides it's going to close its  
14 -- its current cell.  And as we heard earlier from the  
15 City, that point in time has shifted.  We originally --  
16 they originally thought that the site would be at  
17 capacity 2008 and here we are several years later.

18                  So I -- I think there needs to be a point  
19 in time before they close the facility, obviously, to --  
20 to have a plan to the Board and review.  You know, six  
21 (6) months before closure of the -- of the existing cell  
22 might be a good time frame for external review,  
23 considering it also has to go to the Board and get  
24 approved by the Board and there might be a little bit of  
25 back and forth in between.

1 THE CHAIRPERSON: Further questions?

2 MR. JAMIE VANGULCK: One (1) final  
3 question, Mr. Chair.

4 With consideration given to the  
5 information that will be submitted to the Mackenzie  
6 Valley Land and Water Board from the Proponent during the  
7 term of the new water licence, what licence term does  
8 INAC recommend for the new water licence?

9 MR. ROBERT JENKINS: It's Robert Jenkins.  
10 We -- INAC didn't have a recommendation on the term of  
11 the water licence, and I know there's been a couple time  
12 frames sort of shifted around. The City is -- is  
13 recommending a fifteen (15) year licence. Environment  
14 Canada is recommending ten (10). At this time we don't  
15 have -- we don't have a recommendation for a term.

16 We would like to point out though that --  
17 that submission of plans, things like that are a  
18 requirement of a water licence. So, you know, those sort  
19 of things need to be submitted regardless of licence  
20 term. So whether you have a twenty-five (25) year  
21 licence or a five (5) year licence, if your plan says,  
22 "Submit on this date," it's supposed to be submitted on  
23 that date. So I guess I'd sort of throw that out for  
24 consideration of the Board.

25 The other point I'd like to -- to say is

1 that if there are major changes during the term of the  
2 licence, you know, this is a Type A water licence and we  
3 all need to come back here and sit in this room and talk  
4 about it again. So -- so from that point of view, you  
5 know, a longer licence term, if there's major changes  
6 during the life, we need to come back to a public  
7 hearing.

8 So I didn't -- didn't answer your question  
9 again but that was kind of on purpose and see if you have  
10 a follow-up.

11

12 (BRIEF PAUSE)

13

14 THE CHAIRPERSON: Do you have a follow-  
15 up, Jamie, or can we move on?

16

17 (BRIEF PAUSE)

18

19 MR. JAMIE VANGULCK: Sorry, Mr. Chair.  
20 No, no follow-up question. Thank you.

21 THE CHAIRPERSON: Okay. Then we will go  
22 to the Board members. Sabet?

23 MS. ELIZABETH BISCAEY: No questions,  
24 Chair.

25 THE CHAIRPERSON: Pat...?

1                   MR. PAT LACROQUE:    No questions, Mr.  
2 Chair.  Thanks.

3                   THE CHAIRPERSON:    Floyd...?

4                   MR. FLOYD ADLEM:       No questions.

5                   THE CHAIRPERSON:    Okay.  Thank you then  
6 for your very informative presentation.  And we're going  
7 to take a ten (10) minute break here.  We just have some  
8 discussions here among the members.  Thank you.

9                   MR. ROBERT JENKINS:    Thank you, Mr.  
10 Chair.

11

12 --- Upon recessing at 4:29 p.m.

13 --- Upon resuming at 4:44 p.m.

14

15                   THE CHAIRPERSON:    Okay, if we could have  
16 everybody take their seats, please.

17

18                                   (BRIEF PAUSE)

19

20                   THE CHAIRPERSON:    Okay, thank you.  The  
21 next Intervenor presentation up is the North Slave Metis  
22 Alliance.  And before we call them up, I just want you to  
23 know that the Board, Sheryl, has reviewed and seen your  
24 PowerPoint presentation, and the Board has, with our  
25 staff, determined that a number of your slides contain



1 new information not previously submitted.

2                   So, therefore, please note that slides 10  
3 to 18 of your presentation are not admissible in these  
4 proceedings, so we will ask you to skip over these  
5 slides. And, also, you have raised in your presentation  
6 a number of issues relating to the preliminary screening  
7 exemption that the Board made. And we do not want to  
8 hear information on this issue today as this Hearing is  
9 to deal with the terms and conditions of the water  
10 licence.

11                   So if that is clear in our determination,  
12 you can please proceed with your presentation.

13

14                   (BRIEF PAUSE)

15

16                   THE CHAIRPERSON: If you could just  
17 identify yourself and your staff for the record, please?  
18 Thank you.

19

20 PRESENTATION BY NORTH SLAVE METIS ALLIANCE:

21                   MS. SHERYL GRIEVE: Good afternoon. My  
22 name is Sheryl Grieve and I'm presenting for the North  
23 Slave Metis Alliance. On my right is Danielle De Fields.  
24 She's a new employee of NSMA and is -- this is her first  
25 water licence hearing.

1 THE CHAIRPERSON: Sorry, Sheryl, we're  
2 having a hard time hearing you. I'm not sure, is the mic  
3 on, or you're not speaking right into it, perhaps.

4 MS. SHERYL GRIEVE: I'm sorry, I'm very -  
5 - oh, I'm very quiet. I'll start over. Good afternoon.  
6 Thank you for the opportunity to speak at this Hearing.  
7 My name is Sheryl Grieve and I'm presenting for the North  
8 Slave Metis Alliance.

9 On my right is Danielle De Fields. She's  
10 a new employee at NSMA. This is her first experience at  
11 a water licence hearing. And on my left is Brittany  
12 Shuwer. She is also new with NSMA and her first  
13 experience at a water licence hearing.

14 The very first thing -- the very first  
15 thing I should say, just in case it does not go without  
16 saying, is that NSMA does support the City being granted  
17 a water licence and that all efforts by the City and by  
18 the regulators to provide good quality water to the  
19 residents of Yellowknife and to treat wastewater in the  
20 best possible manner is supported and appreciated.

21

22 (BRIEF PAUSE)

23

24 MS. SHERYL GRIEVE: I think I went the  
25 wrong way. Our intervention is primarily related to a

1 lack of capacity to be consulted. The lack of adequate  
2 consultation and the lack of respect for existing  
3 aboriginal Treaty and existing water users rights.

4                   In our November 27th intervention notice,  
5 we referred to several significant environmental issues  
6 that should be assessed and reiterated our outstanding  
7 information requirements as already submitted on August  
8 27th, 2009. We also noted the need for Crown  
9 consultation on the interference with Aboriginal and  
10 Treaty rights and the need for compensation to existing  
11 water users.

12                   This letter was sent on the 27th of August  
13 and the text of the letter should be on -- the letter is  
14 on the Public Registry and the text does list issues or  
15 potential issues and the reason why they may be potential  
16 issues is because of our lack of capacity, and we weren't  
17 able to ascertain whether they were issues, potential  
18 issues or non issues. But our concerns were possible  
19 impacts to NSMA heritage values, concern about the  
20 misunderstanding of the Prince of Wales Northern Heritage  
21 Centre's mandate, the fact that archaeological sites are  
22 not equal to heritage values and their area of expertise  
23 not necessarily covering Metis heritage -- or cultural  
24 values and heritage values.

25                   That letter, which was on the Public

1 Registry earlier, also mentioned lack of capacity,  
2 community concern, concerns about potential cumulative  
3 effects, interference with existing water users rights  
4 including nuisance and convenience and noise,  
5 interference with traditional use and occupancy of lands  
6 and waters and with Treaty rights.

7                   On September the 30th, we also put a  
8 letter onto the public record for this proceeding. It's  
9 there if anyone wants to read it. All three (3) of the  
10 letters, including the one that's on the front table,  
11 together compose our intervention on this proceeding.

12

13                   (BRIEF PAUSE)

14

15                   MS. SHERYL GRIEVE: There are still many  
16 issues outstanding for us. The information may be on the  
17 Public Registry and the City may be dealing with it. We  
18 just don't know due to our lack of capacity and inability  
19 to keep up with the process as required.

20                   It is our understanding that the City will  
21 expand the dump into the area currently being used as a  
22 winter road staging area. And we understand or a rumour  
23 has it that a new and much better water treatment plant  
24 is planned.

25                   The NSMA encourages both of these

1 activities to be carried out as soon as possible if -- if  
2 this is, in fact, what the City is planning to do.

3 With regards to the term of the licence,  
4 we prefer a minimum -- or a medium term between six (6)  
5 to ten (10) years. We consider that to be a compromise  
6 between managing the City's workload and providing  
7 Intervenor's the opportunity to bring issues forward in a  
8 reasonable period after they arise.

9 The North Slave Metis have a long proud  
10 history in this area and many heritage values deserving  
11 protection. If anyone is interested, we can provide nine  
12 (9) -- up to nine (9) generations of genealogy of our  
13 community in this area and specifically with regards to  
14 Yellowknife, before the City of Yellowknife was here,  
15 possibly even before 1867 Royal Proclamation. This  
16 information can be made available on the Public Registry  
17 if -- if and when we're able.

18 And one final comment is that we should be  
19 properly consulted regarding all activities on our  
20 traditional lands. It is our homeland and we should have  
21 the capacity to be involved.

22

23

(BRIEF PAUSE)

24

25

MS. SHERYL GRIEVE: Thank you for

1 listening and I'm ready for questions.

2

3 QUESTION PERIOD:

4 THE CHAIRPERSON: Okay. Thank you for  
5 your presentation then and we'll go to the City of  
6 Yellowknife.

7 MR. DENNIS KEFALAS: Thank you, Mr.  
8 Chair. Dennis Kefalas, City of Yellowknife. At this  
9 time, we have no questions.

10 THE CHAIRPERSON: Okay. Environment  
11 Canada...?

12 MS. JANE FITZGERALD: Jane Fitzgerald,  
13 Environment Canada. We have no questions.

14 THE CHAIRPERSON: Okay. Then, INAC...?  
15 Sorry, Anne, let's try ENR. I think you'll walk in  
16 circles.

17 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
18 We have no questions.

19 THE CHAIRPERSON: And INAC...?

20 MR. ROBERT JENKINS: Robert Jenkins,  
21 INAC. We have no questions.

22 THE CHAIRPERSON: Okay. Thank you.  
23 Registered speakers? General public?

24 Board staff, technical advisors and/or  
25 legal rep? Jennifer...?

1 MS. JENNIFER BAYLY-ATKIN: Jennifer --  
2 Jennifer Bayly-Atkin, Board Counsel. I have some  
3 questions in relation to the NSMA's intervention on the  
4 issue of water compensation.

5 And the first question is: There are  
6 certain parameters for a water compensation claim being  
7 made under the NWT Waters Act, under Section 14(4)(b),  
8 and my question is: There was no information in NSMA's  
9 intervention related to specific users that NSMA was  
10 representing. I'm wondering if this is still the case.

11 Are there any specific named persons that  
12 have designated NSMA as their representatives to make  
13 this claim?

14

15 (BRIEF PAUSE)

16

17 MS. SHERYL GRIEVE: When applying for  
18 membership to the NSMA, because the purpose of NSMA is to  
19 be a land claim negotiating organization, every member  
20 has signed a release, or a declaration I should say,  
21 appointing NSMA as their spokesperson in -- with regards  
22 to their aboriginal Treaty rights and rights, Metis  
23 rights. So the whole community, every single member, is  
24 an existing water user and the NSMA is the entity making  
25 the claim.

1 MS. JENNIFER BAYLY-ATKIN: Jennifer  
2 Bayly-Atkin. But for this specific claim made for this  
3 in the relation to the specific licence, have there been  
4 any designations by specific users who say that they are  
5 -- they have been adversely affected or could be  
6 adversely affected by this issuance of this water  
7 licence?

8 MS. SHERYL GRIEVE: That would be to  
9 obtain those declarations or whatever affidavits might be  
10 required would be part of the process of consultation  
11 that we do not have capacity to do.

12 MS. JENNIFER BAYLY-ATKIN: Jennifer  
13 Bayly-Atkin again. And the next question I have is again  
14 in relation to the water compensation claim. In your  
15 intervention materials there was no specific evidence of  
16 adverse effect, as I was mentioning before, or whether  
17 the adverse effect had caused specific damages to  
18 individuals.

19 I was wondering if you could address that,  
20 whether you have evidence in relation to that issue?

21 MS. SHERYL GRIEVE: There -- there was a  
22 list of damages that -- that members were experiencing,  
23 whether a water user has to be an individual or not, I am  
24 not sure because other licensees can be wa -- existing  
25 water users as well, and they're not individuals. So I'm



1 -- I'm not too sure whether we need to say which damage  
2 was experienced by which individual or whether it could  
3 be a group of individuals sharing rights and experiencing  
4 common damages.

5 MS. JENNIFER BAYLY-ATKIN: Thank you.  
6 Jennifer Bayly-Atkin.

7 For the purposes of the NWT Waters Act,  
8 you do need evidence of damage to specific individuals,  
9 and that's what I was asking for, whether you had that,  
10 other than what was submitted into -- in your  
11 intervention already.

12 MS. SHERYL GRIEVE: Information does  
13 exist. We haven't -- we haven't submitted it and we  
14 haven't gathered it. It may -- we may have some in  
15 archived files. There may already be plenty of it and  
16 probably is plenty of it on the public registry for other  
17 licences and other issues.

18 Gathering it together takes resources,  
19 which we don't have.

20 MS. JENNIFER BAYLY-ATKIN: Jennifer  
21 Bayly-Atkin. Thank you very much, Mr. Chair. Those are  
22 my questions.

23 THE CHAIRPERSON: Okay, thank you. Any  
24 further comments from the staff?

25 Then we'll go to the Board members.

1 Sabet...?

2 MS. ELIZABETH BISCAYE: No questions, Mr.  
3 Chair.

4 THE CHAIRPERSON: Pat...?

5 MR. PAT LAROQUE: No questions, Mr.  
6 Chair.

7 THE CHAIRPERSON: Floyd...?

8 MR. FLOYD ADLEM: No questions, Mr.  
9 Chair.

10 THE CHAIRPERSON: Okay, thank you then,  
11 and I thank you three (3) for your presentation.

12 And now we will go to registered speakers,  
13 those without a presentation. Come forth to the table  
14 here will be fine. Do you have the speaker there? Yeah.

15 If you could just identify yourself then  
16 and who you represent and Board welcome.

17

18 REGISTERED SPEAKERS:

19 MR. DAN PRIMA: Hello. My name is Dan  
20 Prima. I'm living on block 900 in Yellowknife, jointly  
21 owned with Larry Jones, and I wanted to say something to  
22 the Water Board only because I live on the little lake  
23 that's north of the highway, next to the -- north of this  
24 sewage lagoon.

25 I've been there thirty (30) some years and

1 I've become friends with that little lake. And over the  
2 last couple of years I've noticed that -- well, just to  
3 get one (1) thing straight, that little lake north of the  
4 highway is called Fiddler's Lake, and the one (1) to the  
5 south of the highway, which is labelled "Fiddler's Lake,"  
6 is not Fiddler's Lake. It's actually Trapper's Lake,  
7 and that's on the 1974 maps. And the sewage lagoon is --  
8 was named Fiddler's Sewage Lagoon, just to get at my goat  
9 back in the '80s, I think.

10 But the concern I have that I wanted to  
11 express to the -- the Board is just with respect to the  
12 levels of that lake. And in the last two (2) years I've  
13 noticed some changes on both of those lakes.

14 And in this last summer, when I travelled  
15 all the way around the Trapper's Lake, next to the  
16 Catholic retreat there, I noticed that most of the water  
17 was pretty, well, gungy. You couldn't see through more  
18 than about 6 inches of it. And I didn't see too many  
19 fish except at the little points of egress and entrance  
20 of water to that lake, and it's just these tiny fish.

21 But in my lake, which is actually about  
22 that much higher than Trapper's Lake and Fiddler's Lake.  
23 I started worrying whether the sewage was backing up from  
24 that lagoon, and in touring around through about a -- a  
25 third of that area around the lagoon this summer, I

1 noticed that they had been raising the level of it,  
2 putting on more and more -- building the dam higher. I  
3 mean, I -- and I'm not sure if that's affecting my lake,  
4 but I haven't seen any reference to that in here.

5                   And I was kind of wondering, like, when  
6 the -- the original sewage lagoon was proposed, there was  
7 two (2) options: one (1) was to dump sewage straight into  
8 Great Slave Lake, as they do in Victoria and Halifax, or  
9 to put it into a -- a lagoon and try and treat it  
10 eventually.

11                   And if I remember from the guy at Indian  
12 and Northern Affairs at the time, we were arguing about  
13 that. But one (1) of the things was that the City was  
14 supposed to provide a sewage treatment plan for the  
15 future, which there is none in this proposal either.

16                   And I am almost certain that the plan was  
17 to have a sewage treatment plant in eventually, 'cause  
18 that little lake that they dump everything in is  
19 definitely not holding everything that they put in there.  
20 And how that's going to affect my property and my life is  
21 quite -- well, quite severe, and my -- my point, I live  
22 there because of the beauty of it all there.

23                   So that -- with respect to that one (1)  
24 sewage treatment plan which I thought was supposed to  
25 have been done by the City some thirty (30) years ago

1 when they first started dumping into that lake, for me, I  
2 -- I think, you know, it takes time to do these things,  
3 and I think that in terms of the City's water licence,  
4 that they should have this kind of a plan for some kind  
5 of a treatment. I mean, it's not hard.

6 I -- in 1969 I worked in the Calgary  
7 Sewage Treatment Facility right in downtown Calgary  
8 which, you know, I'm sure there's technology that would  
9 allow us to do it. But I would propose that you guys  
10 don't give the City a very long licence, and I would  
11 guess two (2), three (3) years until they can come back  
12 to the Water Board with a plan for sewage treatment.

13 I mean, I don't think that Yellowknife  
14 should end up being like Halifax or Victoria who  
15 basically just dumps it and deals with it through telling  
16 people not to swim in their harbours. I mean, if you  
17 fall in you pretty much got to go down to the Health  
18 Centre to get a shot.

19 And I think that in terms of Yellowknife,  
20 the way it's going here, they keep dumping more and more  
21 into that little lake system and it was originally just a  
22 slough anyway. And that's eventually going to make its  
23 way somewhere. And especially -- I was reading this  
24 thing about somebody asked some questions about a breach  
25 - I never even thought about that.

1                   So, that's my point and it's just a  
2 personal point. I own that land on that little lake,  
3 Fiddler's Lake. Been there thirty (30) years -- and, oh,  
4 one (1) final point. Why is not -- I just don't know who  
5 to ask, but why is not Fisheries & Oceans not dealing  
6 with some of this?

7                   Like my lake has -- is a fish-bearing  
8 lake; got Whitefish about that big, Pike about that big  
9 and I don't understand why Fisheries hasn't had to deal  
10 with this. I mean, if there's -- if there's a breach in  
11 that stupid little dam on that sewage lagoon, that  
12 water's going to get down to the lake within a day, big  
13 time.

14                   But, that's my point and I think that you  
15 guys should ask the City to provide a proper treatment  
16 plan for the future and give it to them on a restricted  
17 licence because I'm pretty sure they promised that  
18 thirty (30) years ago. Thanks.

19                   THE CHAIRPERSON: Thank you for that,  
20 Dan, for coming out and bringing forth your issues. It's  
21 always refreshing to have the citizens come out.

22                   I can't speak for Fisheries, but I know  
23 that they did have some recommendations. They didn't  
24 come here today, but thank you and does the City want to  
25 respond?

1 MR. DENNIS KEFALAS: Thank you, Mr.  
2 Chair. No, at this time we have no questions or any  
3 response.

4 THE CHAIRPERSON: Thank you. Any other  
5 parties wishing to speak?

6 Okay, if not, then we'll go to closing  
7 remarks from the registered participants, starting with  
8 Environment Canada.

9 MS. JENNIFER BAYLY-ATKIN: Excuse me, Mr.  
10 Chair. Jennifer Bayly-Atkin. Do we not -- we need to  
11 wait until this evening session is over before we can do  
12 the closing remarks.

13 THE CHAIRPERSON: That is what our hope  
14 was, wasn't it. We were try to close out this evening  
15 then, was that -- okay. I guess that will still hold  
16 then, so if -- do the registered participants have any  
17 problems with closing remarks this evening? Everybody's  
18 available? It starts at seven o'clock.

19 Okay, then, I guess -- anything further  
20 from Jamie or Jennifer? Then I guess we'll just close  
21 the meeting out until seven o'clock this evening. Does  
22 that work?

23 Okay. Thank you very much for your  
24 participation.

25

1 --- Upon recessing at 5:09 p.m.

2 --- Upon resuming at 7:30 p.m.

3

4 THE CHAIRPERSON: Okay, good evening,  
5 everyone. Thanks for returning. As of our notice of  
6 7:30, if we don't get anybody registered to speak, then  
7 we will continue with the closing remarks then from the  
8 participants, so that's what we'll do here.

9 And if we could then have the closing  
10 comments, closing remarks, starting with Environment  
11 Canada.

12

13 CLOSING COMMENTS BY ENVIRONMENT CANADA:

14 MS. ANNE WILSON: It's Anne Wilson with  
15 Environment Canada. So we've got very brief closing  
16 comments. We just wanted to thank the Board for a well  
17 run and constructive hearing. I'd like to acknowledge  
18 the good level of agreement we've met -- we've been able  
19 to have with the City on most of our intervention items.  
20 Our concerns have been substantially addressed.

21 We look forward to the next steps in the  
22 process. And we do ask that EC's recommendations be  
23 formalized as licence conditions, and we look forward to  
24 helping with the review of a draft licence. Thank you.

25 THE CHAIRPERSON: Okay, thank you for



1 that then. Closing comments from North West Territory  
2 Government, ENR.

3

4 CLOSING COMMENTS BY GNWT-ENR:

5 MS. AILEEN STEVENS: Aileen Stevens, ENR.  
6 I would just like to thank the Board for hosting the  
7 hearing and thank the City for reaching an agreement, and  
8 I look forward to working with you in the future.  
9 Thanks.

10 THE CHAIRPERSON: Okay, thank you.  
11 Indian and Northern Affairs Canada.

12

13 CLOSING COMMENTS BY INDIAN AND NORTHERN AFFAIRS CANADA:

14 MR. ROBERT JENKINS: Thank you, Mr.  
15 Chair. It's Robert Jenkins, with INAC. I'd just like to  
16 commend the Board for an efficient and effective public  
17 hearing today. I thank the City for working with us to  
18 come to agreement on our recommendations. I remind the  
19 Board that our -- our rationale behind our  
20 recommendations are in our written evidence, and we'd  
21 like to see our recommendations formalized within the  
22 water licence.

23 I look forward to seeing a draft licence  
24 and working with everyone from that point on. Thank you.

25 THE CHAIRPERSON: Okay, thank you. North

1 Slave Metis Alliance. I don't believe they're here.

2 Okay, then we'll have closing remarks from  
3 the City of Yellowknife.

4

5 CLOSING COMMENTS BY CITY OF YELLOWKNIFE:

6 MR. DENNIS KEFALAS: Thank you, Mr.  
7 Chair. Dennis Kefalas, with the City of Yellowknife.  
8 Once again I'd like to thank the Board, its members, and  
9 its staff for organizing the -- the whole application  
10 process and allowing us to present our -- our  
11 application.

12 Just to reiterate, we are a small  
13 community of eighteen thousand (18,000) to nineteen  
14 thousand (19,000) people, and we have made -- we have  
15 agreed to quite a few recommendations, in terms of coming  
16 from the different Intervenors, which will definitely  
17 have an impact on our -- both our internal forces, what  
18 you see right here, and our external funding, or our  
19 capital funding over the next four (4) or five (5) years.  
20 So one (1) of the major reasons that we were asking for a  
21 fifteen (15) year duration of the water licence is to  
22 help the City address our infrastructure gap, which will  
23 -- right now we're experiencing a gap of about \$70  
24 million in terms of aging infrastructure.

25 So once we deal with all our -- with all



1 lot of work to be completed before a water licence can go  
2 to the Minister of INAC. Timelines are very tight. We  
3 ask you to be diligent in reviewing the record,  
4 commenting on the draft licence, and assisting the Board  
5 to make a good decision.

6 As you all know, this is a Type A water  
7 licence renewal application and the final decision is  
8 made by the Minister of Indian and Northern Affairs  
9 Canada. All parties have or will have access to the  
10 Board's work plan and the staff will prepare and  
11 distribute a draft water licence for your review and  
12 comment by February the 11th, 2010. The Board will  
13 review all comments on the draft water licence and we  
14 will make a decision on the final licence at a meeting  
15 near the end of March.

16 A final water licence and reasons for  
17 decision will be sent to the Minister of INAC for  
18 approval. The Board relies on all parties to prepare  
19 thoroughly and come to its hearings prepared to address  
20 any issues within their mandates. The Board's process  
21 enables that there is every opportunity to work  
22 collaboratively to find solutions by the hearing process.  
23 It's not designed to be a collaborative experience. The  
24 hearing process is an enquiry process to assist the Board  
25 in making the best licensing decision possible.

1           All parties must understand that when they  
2 ask the Board to do something or make the recommendation,  
3 that they have the onus of responsibility to produce  
4 enough evidence to convince the Board to accept their  
5 recommendations.

6           No matter what the Board's view is maybe  
7 the legal framework means that the Board cannot make  
8 decisions on trust alone. If a Board does not provide --  
9 if a party does not provide enough evidence to convince  
10 the Board, they are not going to succeed with their  
11 recommendations.

12           In closing, we'd like to thank the City of  
13 Yellowknife, North Slave Metis Alliance, Environment  
14 Canada, GNWT-ENR, and INAC. We'd also like to thank our  
15 interpreter Margaret Mackenzie, for her patience and hard  
16 work in the translating.

17           I'd also to thank our court reporter,  
18 Wendy, and the Pido technician. All their work today is  
19 much appreciated.

20           And of course many thanks to our staff and  
21 consultants and legal counsel.

22           Above all, thank you for all your courtesy  
23 and your respect for all and each other in this room  
24 today.

25           And in particular, I'd like to thank the

1 Board here for their dedication and hard work that makes  
2 everybody's job and mine in particular, a lot easier.

3 So thank you very much and if you bear  
4 with us, stand respectfully and have a closing prayer, we  
5 can close the meeting up.

6

7 (CLOSING PRAYER)

8

9 THE CHAIRPERSON: Okay, thank you very  
10 much then, Sabet. So this Hearing is now closed. Thank  
11 you.

12

13 --- Upon adjourning at 7:38 p.m.

14

15

16 Certified Correct,

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21 \_\_\_\_\_  
Wendy Warnock, Ms.

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