

MANITOBA CLEAN ENVIRONMENT COMMISSION

HOG PRODUCTION INDUSTRY REVIEW

TRANSCRIPT OF PROCEEDINGS

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Held at the Keystone Centre

Brandon, Manitoba

THURSDAY, APRIL 19, 2007

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APPEARANCES:

Clean Environment Commission:

Mr. Terry Sargeant	Chairman
Mr. Edwin Yee	Member
Mr. Wayne Motheral	Member
Ms. Cathy Johnson	Commission Secretary
Mr. Doug Smith	Report Writer

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NO EXHIBITS MARKED

1 Thursday, April 19, 2007

2 Upon commencing at 9:08 a.m.

3 THE CHAIRMAN: Good morning. We will  
4 come to order now. We have an obviously sparse  
5 crowd this morning. We originally had a full  
6 slate for this morning's agenda, but one person  
7 moved to last night, and a couple of others  
8 cancelled. We do have, I think we have three of  
9 this morning's presenters are here, two in the  
10 room now and another one in the building, so we  
11 will move ahead with them.

12 First I just remind you of my standard  
13 warning. I would ask that you turn cell phones  
14 off, please, or at least turn the ring tone off.  
15 If you must take a call, please leave the room,  
16 and please no conversations in the audience.

17 First off is Weldon Newton. Would you  
18 please state your name for the record?

19 MR. NEWTON: Weldon Newton.

20 WELDON NEWTON, being first sworn, presented as  
21 follows:

22 THE CHAIRMAN: Go ahead, sir.

23 MR. NEWTON: Thank you very much for  
24 the opportunity to present my thoughts on the hog  
25 production industry for you today. I operate a

1 grain and hog farm in partnership with my brother,  
2 west of Neepawa. It consists of about 2300 acres  
3 of grain production and a 90 farrow to finish hog  
4 operation. We also have one full-time employee.  
5 I have had the opportunity in the past and the  
6 responsibility to serve as elected representative  
7 on Manitoba Pork Est, when they had the single  
8 desk marketing agency, also on the Canadian Pork  
9 Council. More recently I have served as an  
10 elected representative on Keystone Agricultural  
11 producers and the Canadian Federation of  
12 Agriculture. The comments and criticisms that I  
13 present today are not made lightly and only after  
14 careful consideration and thought.

15 My farm is located seven miles from  
16 the Spring Hill Farms processing plant and about  
17 50 miles from the Maple Leaf plant. We produce  
18 all of our feed grains and peas, and we bring in  
19 canola meal and a base pre-mix for our hog  
20 rations. We manufacture most of our feed. We use  
21 a least cost computer program to formulate our  
22 rations, along with advice from the nutritionist  
23 from our feed company, and our rations are made  
24 using peas, barley, hulless barley, canola meal  
25 and premix. We do buy a commercial starter ration

1 which we feed to the pigs until they are about six  
2 weeks of age. And we do test our manure on an  
3 annual basis to determine its nutrient content.

4 We have had hogs on this farm since  
5 our dad established it in 1957. I acknowledge it  
6 is a small operation by today's standard in the  
7 industry, but hopefully and probably it will  
8 expand in the future. We have one neighbour  
9 within one mile of our barns. We raise our sows  
10 in group pens on straw bedding. The manure from  
11 the dry cell barn is piled in the winter time and  
12 then spread in the summertime. In the summer, the  
13 manure from this barn is held in a shallow  
14 concrete pit and spread and incorporated on a  
15 weekly basis.

16 The rest of our operation is on liquid  
17 manure. We spread manure from one storage pit  
18 about once a month, and from a second pit about  
19 every three months. These pits are concrete and  
20 they also have concrete covers on them.  
21 Obviously, for this operation the ability to  
22 spread at this time in the winter is essential.

23 We own and operate 12 of the 16  
24 quarter sections of land which are within a one  
25 mile radius of our barns. In the summer we keep

1 one field in summer fallow to spread our manure  
2 on. The manure is surface spread and then  
3 incorporated the same day with a cultivator. We  
4 sow winter wheat on that summer fallow field in  
5 late August. When this operation expands in the  
6 future, I expect to be able to provide sufficient  
7 manure storage to eliminate winter spreading. I  
8 would prefer not to spread in the winter, but at  
9 this point I have no alternative. And I can  
10 certainly assure you, it is not a pleasant task  
11 when it is 40 below and a 20 mile an hour north  
12 wind and there is two feet of snow on the fields.

13 We test most of our fields every year  
14 to determine what the fertilizer requirements for  
15 the next crop will be. We have no field that is  
16 more than 20 parts per million of phosphorous on  
17 the basis of soil tests taken last fall.

18 I hope that helps to explain some of  
19 my frustration with the process that you are asked  
20 to carry out, and the accompanying moratorium  
21 which the Manitoba Government has placed on the  
22 expansion of the hog industry.

23 The soil tests with the higher  
24 phosphorous levels are due to spreading on parts  
25 of those fields during the year the test was taken

1 or the previous year. The summary of these soil  
2 tests are on the back page of my presentation, if  
3 you wish to look at it.

4 As you can see, in 2001 there was  
5 several fields there that had a higher level. I  
6 cannot totally explain that, but I suspect what  
7 has happened is we spread some manure on those  
8 fields before the soil tests were taken. And  
9 since we have a commercial operator do our soil  
10 test, he probably probed in some of the spots  
11 where we had already spread manure. I suspect  
12 that is why the high levels are there. As you can  
13 see last year, in the last two years actually,  
14 there is no other fields that have significant  
15 levels in them.

16 And it is with some reluctance that I  
17 provide this data. I don't believe it is  
18 necessary or appropriate that this business  
19 information is made routinely available to the  
20 public, but I do provide it to you today to back  
21 up my presentation.

22 I was asked to be part of the  
23 phosphorous expert committee which was mandated to  
24 examine the need to regulate manure application on  
25 the basis of phosphorous, as well as nitrogen, in



1 the fall of 2002. This committee did look at the  
2 science behind the movement of phosphorous off  
3 agricultural land. And certainly we found some  
4 surprising results in the research literature.  
5 The amendments to the Livestock Manure and  
6 Mortalities regulation registered on November 8,  
7 2006, incorporated the practical recommendations  
8 that were developed by the committee. I believe  
9 those amendments are sufficient to address the  
10 issue of phosphorous accumulation in the soils  
11 from the spreading of livestock manure from all  
12 species, not just hogs. In fact, I believe it is  
13 quite probable that clay or clay loam soils may be  
14 able to absorb significantly higher levels of  
15 phosphorous before the risk of environmental loss  
16 becomes significant. Each soil type has a  
17 different ability to absorb phosphorous, however,  
18 we don't have that data for all of our soils at  
19 this time, and until we have that additional  
20 research data, the current proposal I believe is  
21 acceptable.

22 It has become obvious that a small  
23 portion of the province may have a problem meeting  
24 the new regulations based on phosphorous. This  
25 will affect chicken and dairy producers, as well

1 as hog producers. The rest of the province has  
2 lots of land to spread all livestock manure on the  
3 basis of phosphorous as a crop fertilizer.

4 Let's get past the grandstanding and  
5 unsubstantiated accusations, and deal with the  
6 real environmental and financial issues in a  
7 manner that will allow agriculture, and in  
8 particular the hog industry, to continue to be a  
9 positive economic contributor to Manitoba.

10 Agriculture does produce noise, dust,  
11 odour and light which can be aggravating to some  
12 people under some conditions. That is the reality  
13 of rural life. We may argue over what are  
14 acceptable levels, but they are a fact of life,  
15 and to me the needs of agriculture are more  
16 important than the idealistic view of country life  
17 that many in our society have, and that refers to  
18 some of my farmer neighbors as well.

19 We do have a better -- we are doing a  
20 better job today of protecting the environment  
21 than agriculture has ever done. And we will  
22 continue to improve in the future, I have no doubt  
23 about that. There has been considerable new  
24 scientific evidence published in the last two  
25 years that has started to show how phosphorous

1 moves from the landscape. It appears that large  
2 amounts of phosphorous moves off the landscape  
3 from vegetative matter. And the role of freeeze  
4 thaw cycles on the green vegetation appears to  
5 increase the movement of phosphorous in the spring  
6 run-off, and that is certainly when the largest  
7 movement of phosphorous occurs in Manitoba.

8 More than 30 years ago, most farms  
9 changed to zero till or minimum till to reduce  
10 soil erosion and to increase soil organic matter  
11 that tillage destroys very quickly. This also  
12 significantly improves the water holding capacity.  
13 This change in soil management practices has  
14 probably contributed to a significant increase in  
15 the phosphorous that moves off our fields. And we  
16 also chop all of the straw today, and the new  
17 straw choppers on our combines produce much  
18 smaller particles than it did 20 years ago. And I  
19 suspect this also makes a contribution to the  
20 increased phosphorous movement off our fields, and  
21 we can assure you we are not going back to summer  
22 fallow in crop production.

23 I expect you have already seen some of  
24 the material published by Dr. Andrew Sharpley of  
25 the U.S.D.A. Agricultural Research Service, and

1 more recently of the University of Arkansas,  
2 Fayetteville, and this is on phosphorous movement  
3 from the landscape. His recent work on the role  
4 of the freeze thaw cycles should be of particular  
5 interest. The research in Manitoba by the Soil  
6 Science Department, Faculty of Agriculture,  
7 University of Manitoba, has verified these  
8 processes also occur in Manitoba.

9 I assume that you will or have talk to  
10 Dr. Don Flaten and others at the University of  
11 Manitoba to understand these processes.

12 We can not achieve zero nutrient  
13 movement off the landscape. We must be sure that  
14 the expectations for agriculture to reduce  
15 nutrient movement off our fields are actually  
16 achievable. And it is essential that any new  
17 regulations recognize the published research that  
18 is applicable to Manitoba, as well as the ability  
19 of producers to implement them on their farms.

20 I have a three-step evaluation process  
21 that I use for any new regulations or the adoption  
22 of new management practices. First, am I  
23 convinced that these changes will actually have a  
24 measurable impact? Secondly, can I make the  
25 necessary changes in my management practices to

1 make the best use of this new information, and  
2 that may include the purchase of new equipment?  
3 And thirdly, and the most important one in the  
4 end, is can I afford to make the appropriate  
5 changes in management practices? When these three  
6 conditions can be satisfied, I will do my best to  
7 adopt new management practices.

8           Needless to say, I was astounded to  
9 see a moratorium placed on the construction of new  
10 or expanded hog barns on December 7, 2006. It is  
11 essential that this moratorium be removed as soon  
12 as possible so we can plan for the future of not  
13 only the hog industry, but also the whole  
14 agricultural industry in Manitoba. To me the  
15 imposition of this province-wide moratorium was  
16 one of the most uninformed, most unnecessary and  
17 political opportunist pieces of agriculture policy  
18 implemented in Manitoba, and I don't say that  
19 criticism lightly. I expect and believe that we  
20 deserve a better and more informed decision making  
21 process by people who choose to serve in elected  
22 public office.

23           It also sends a message to young  
24 people considering a career in agriculture in  
25 Manitoba that their job or career can suddenly be

1 put on hold if a controversial issue happens to  
2 emerge in their chosen field of employment. I  
3 can't expand my hog barn, but my neighbour can  
4 develop a 1,000 head or a 10,000 head feedlot.  
5 That to me does not make sense. I can't plan for  
6 the future of my farm operation until you have  
7 reported to the Minister, and he and his cabinet  
8 colleagues decide if there is to be a future for  
9 the hog industry in Manitoba. If there is to be  
10 another generation on our farm, it will be  
11 necessary to expand the hog operation.  
12 Fortunately, no one from the next generation had  
13 an interest or was in a position to be a part of  
14 this operation last fall or will this year.  
15 Unfortunately, if they had been interested, they  
16 could not have been accommodated, as we could not  
17 expand the hog barns. The only other way for our  
18 farm to expand is to outbid our neighbors to get  
19 additional grain land, and I am not prepared to do  
20 that as that is not a financially lucrative  
21 proposition.

22 I have provided you with a summary of  
23 the soil test of phosphorous levels on our farms  
24 for the last ten years. I have the records that  
25 date back to actually 1975 for most of our fields.

1 We use the fertilizer recommendations from soil  
2 test labs as the fertilizer program for our farm.  
3 If you examine the summary, you will see that we  
4 don't have an excess of phosphorous accumulation  
5 in our soils. In addition to the manure that we  
6 spread, and it covers probably about 80 acres each  
7 year, in addition we buy over 40 tonnes of  
8 phosphate fertilizer, usually 1151 every year to  
9 meet crop requirements. We also purchase 70  
10 tonnes of anhydrous ammonia each year to supply  
11 crop requirements.

12 Land use planning is an essential  
13 issue for rural municipalities at this time. The  
14 new Planning Act that came into effect on  
15 January 1, 2006, it removed the ability of local  
16 municipal councils to make any decisions regarding  
17 the construction and development of manure storage  
18 structures. They can only place two conditions on  
19 these structures, plant trees around the structure  
20 and/or cover the storage structure. It is  
21 essential that local municipal councils do not  
22 have any more authority over these manure storage  
23 structures or the application of manure in the  
24 future. Many have shown they were not capable of  
25 making good decisions about manure storage

1 structures and manure application in the past, and  
2 none must have that opportunity in the future.

3 It is essential that producers in  
4 different areas of Manitoba treat similar  
5 environmental issues in a similar manner. This  
6 can only be done with Provincial oversight.

7 The majority of people living in rural  
8 areas are not involved in active agriculture, and  
9 even fewer are involved in livestock production.  
10 However, many expect agriculture to meet an  
11 idealistic view of rural life. Agricultural  
12 practices must be protected.

13 The new development plans required by  
14 the planning act must have a livestock operations  
15 policy. It is essential that similar  
16 environmental risks be addressed in a similar  
17 manner throughout Manitoba. Provincial oversight  
18 in the development of these new development plans  
19 is essential. Public use -- public land use  
20 policy number 2 must continue to be the basis for  
21 the separation distance and location of new and  
22 expanded livestock operations.

23 We must also ensure that  
24 municipalities are not successful in finding new  
25 creative ways to hinder the development or



1 expansion of livestock operations as these new  
2 land use policies are developed. As an example,  
3 the one I live in is trying to force new or  
4 expanding operations into an open-ended request  
5 process for impact studies before they are allowed  
6 to proceed. Our plan, as it is being developed,  
7 is currently under appeal.

8           The hog industry has significant  
9 processing capacity in this province and there  
10 appears to be interest in increasing that  
11 capacity. The Maple Leaf plant is a world scale  
12 plant, and the Springhill Farms, while smaller,  
13 has the potential to be a niche market plant.  
14 They are also relatively new plants. We must find  
15 ways to stop exporting unprocessed grain around  
16 the world and letting everyone else realize the  
17 benefits from processing this grain.

18           It is obvious to everyone in the  
19 agricultural community that the railways, both CN  
20 and CP and their employees, are only interested in  
21 moving bulk grain and special crops when it suits  
22 them and under conditions which they wish to  
23 dictate. To me, it makes a lot more sense to keep  
24 that carload of feed barley or feed wheat in  
25 Manitoba, and export a container of pork which

1 probably has a value of 10 to 20 times that of a  
2 feed barley. And it also provides a job and  
3 respectable income for families in Manitoba.

4           If we look at the scale of  
5 agriculture, there is room for both small and  
6 large operations. Operations must be available to  
7 provide the equivalent living standard and income  
8 that the rest of society enjoys. It is not  
9 unusual to have grain farms that are 5,000, 10,000  
10 or 15,000 acres in size. These farms once  
11 provided the living for many farm families.  
12 However, if you decide that you only wish to have  
13 a smaller grain farm, and also have a hog  
14 operation or a feedlot which requires attention  
15 every day of the year, and provides full time  
16 employment for your family and other people in the  
17 community, you may also have to deal with the  
18 unfounded fears of everyone within miles around.  
19 And currently in the case of the hog industry, we  
20 must also deal with the lack of understanding of  
21 agriculture by the Cabinet of the Manitoba  
22 Government. Somehow we need some serious attitude  
23 changes in all of Manitoba.

24           I would suggest to you that there are  
25 currently sufficient regulations in place to

1 govern the hog industry, and indeed all of the  
2 livestock industry, and I hope that you will come  
3 to the same conclusion when you finish your work.

4 Thank you very much for the  
5 opportunity today.

6 THE CHAIRMAN: Thank you, Mr. Newton.  
7 First let me say you do assume correctly, we have  
8 talked with Dr. Flaten, and we probably will be  
9 some more as this investigation unfolds.

10 I would like to -- I don't want to get  
11 into a great debate on the role of democracy, but  
12 I would like to play devil's advocate a little bit  
13 with you on the issue of land use planning. And  
14 we have heard some very strong and well developed  
15 arguments on both sides of this land use planning  
16 issue, that the municipalities should be given  
17 ultimate control, that the municipalities should  
18 have almost no control, as you and others have  
19 suggested. Aside from the fact that you say they  
20 often don't have the skills or experience to make  
21 the decisions, why shouldn't local people, if a  
22 majority of local people want a certain policy in  
23 place, why shouldn't that carry the day?

24 MR. NEWTON: Well, land use planning  
25 is a very important issue for all of Manitoba, and

1 this is not about a popularity contest. I look in  
2 my area, and I guess I will just take the township  
3 that I'm in, or the two townships around me. I'm  
4 a relatively small grain farmer in our area. We  
5 have 2300 acres, most of the others ones are 5000  
6 to 10,000 acres. So there are a lot of people out  
7 there in rural subdivisions that just farm in  
8 town. And I don't think the business policy of a  
9 community should be developed by a popularity  
10 contest. And unfortunately, that is what may be  
11 occurring if you let everybody have their say. I  
12 think there needs to be some good thought into how  
13 this agricultural land is used. Mother nature is  
14 not making any more agricultural land, and I think  
15 we need to protect and use it for what it is best  
16 for, and limit the uses for other sources that are  
17 not producing food and fiber.

18 THE CHAIRMAN: But ultimately --  
19 perhaps not ultimately, but to some extent  
20 democracy has become a popularity contest, whether  
21 it is at the Municipal or Provincial or Federal  
22 level. Shouldn't -- and again, I don't want to  
23 appear that I'm taking a position, I want to get  
24 your thoughts on it -- shouldn't the people, if  
25 that is the will of the majority, and that is not

1 necessarily a popularity contest, it is the will  
2 of the majority, shouldn't they be able to say, we  
3 should make the decisions for our community?

4 MR. NEWTON: I think we have to be  
5 very careful with that, and we need some  
6 consistency throughout the province. Just because  
7 I have a few neighbors that happen to either like  
8 my hog operation or absolutely detest it shouldn't  
9 be the basis on deciding whether I can expand or  
10 not. I want the same opportunity that you can  
11 have in other municipalities that may have, you  
12 know, a better attitude. But I think we have to  
13 look at what is the best use of that land out  
14 there for the benefit of all of society. And I  
15 would suggest that the continued, almost  
16 unlimited, use of it for rural subdivisions in  
17 many municipalities is not the best use of that  
18 land, and we will as a society pay a huge price  
19 for that down the road.

20 You know, I guess when my dad or my  
21 grandfather was farming, a quarter section was a  
22 big farm, that is all you needed, and at that  
23 point you got everything you needed off the farm.  
24 That is not the case today. You need large  
25 operations, large levels of gross income in order

1 to make an equivalent living to what I could earn  
2 being employed for somebody in town. And I think  
3 we have to recognize that. And people have to  
4 appreciate what is necessary to make a viable  
5 agricultural operation today.

6 THE CHAIRMAN: Thank you. Edwin.

7 MR. YEE: Yes, Mr. Newton, I noticed  
8 that you formulate your rations based on the  
9 advice of a nutritionist. Do you employ any of  
10 the enzymes like phytase or anything else at this  
11 time?

12 MR. NEWTON: No, we are not using  
13 phytase at this time. As I said, we have our  
14 least cost computerized formula. We do our work  
15 and then we have the nutritionist from the feed  
16 company verify that what we are doing is accurate  
17 and appropriate for the grains that we have.  
18 Certainly, if we expanded and become a larger  
19 operation, I would suspect that we would be in a  
20 position then to probably use phytase, but we  
21 don't currently, and we have lots of land to  
22 spread the manure on as well, so it is not a big  
23 issue for us at this point.

24 MR. YEE: What portion of your feed  
25 fix mix is imported versus what is grown in

1 Manitoba?

2 MR. NEWTON: I would say most of it is  
3 grown in Manitoba. Our feed grains we grow  
4 ourselves. We buy canola meal that we purchase  
5 from Bundy in Harrowby, as a matter of fact. And  
6 the other part that we bring in is the starter  
7 rations which the feed mill manufactures. I'm not  
8 sure of all of the ingredients in that. I suspect  
9 most of them are indeed Manitoba products, and  
10 there will be some additional one in the  
11 phosphorous and calcium additions within the  
12 pre-mix will be imported into the province, but  
13 basically everything else is used in Manitoba. We  
14 also use canola oil as well as canola meal in our  
15 rations which we get from Bundy in Harrowby as  
16 well.

17 THE CHAIRMAN: Thank you. Wayne.

18 MR. MOTHERAL: Thank you,  
19 Mr. Chairman.

20 Mr. Newton, land use planning has  
21 become and especially seems to be a major focus as  
22 we moved into Western Manitoba. There seems to be  
23 more and more of an issue, and both ways, I am not  
24 saying it is all one sided, it has been two sided.  
25 We have noted it in our things, and I think it is

1 becoming, it is higher up in on our list now I  
2 think. We just discussed this, it is one of the  
3 major problems there has been in Manitoba. So  
4 thank you for bringing it up again.

5 Just as a personal thing, where do you  
6 market your pigs? Like you say you are close to  
7 Spring Hill and Maple Leaf both. Where do your  
8 pigs go to?

9 MR. NEWTON: Well, we are seven miles  
10 from the Spring Hill plant and they do have an  
11 assembly yard. Our hogs are actually slaughtered  
12 at Spring Hill but they are sold to Maple Leaf.  
13 Spring Hill is custom killing for Maple Leaf at  
14 this point and has been for a number of years. As  
15 I say, we are the closest hog farm to Maple Leaf  
16 and seven miles is a whole lot better than having  
17 to truck 50 miles to Brandon. If I had to truck  
18 to Brandon, and we may have to down the road, I  
19 don't know, hopefully not, I am going to have to  
20 get a bigger truck. I make two trips when I do  
21 ship now and I can't do that in one day to Maple  
22 Leaf. They only want liners there, and I don't  
23 own a liner at his point.

24 MR. MOTHERAL: Another question, in  
25 your area, now when I say your area I probably



1 mean, you know, say ten miles surrounding Neepawa  
2 or so, are there many hog operations, are there  
3 many large scale hog operations?

4 MR. NEWTON: No, there are not a  
5 number -- there are not very many large  
6 operations. The closest ones that are large are  
7 Hutterite colonies, and I guess to the south of me  
8 there is one about 12 miles south, there is one  
9 about 10 miles north, and there is another one  
10 about 15 miles northeast. There are a number of  
11 smaller hog operations north of Neepawa which  
12 aren't in my municipality, in the RM of Rosedale.  
13 I'm not sure how big they are, many of them are  
14 not too much bigger than what ours are, but I know  
15 there is a number up there.

16 MR. MOTHERAL: And I know that your  
17 area does have a larger scale development plan.  
18 You have a -- is it called Neepawan area?

19 MR. NEWTON: Yes, the Neepawan area  
20 development plan has been in existence since I  
21 believe about 1974, and it entails the RMs of  
22 Langford, Lansdowne, Rosedale, and the Town of  
23 Neepawa. It has been relatively successful, I  
24 believe, in the past. And currently, like  
25 everybody else, they are in the process of making

1 their new development plan. And I believe we are  
2 one of the first ones to get near the end of it,  
3 but there are some significant issues in it. And  
4 their current proposal is being appealed, and that  
5 appeal has not been heard, and I suspect probably  
6 won't be heard until you are finished your work  
7 and have reported as well. It is in the process.

8 MR. YEE: Yes, we have heard that from  
9 many municipalities, they are awaiting the Clean  
10 Environment Commission report.

11 THE CHAIRMAN: Next is Dwayne  
12 Blackbird. State your name for the record,  
13 please?

14 DWAYNE BLACKBIRD, having been sworn, presented as  
15 follows:

16 MR. BLACKBIRD: Good morning to the  
17 people first. I prepared a written presentation  
18 plus I'm going to give an oral presentation. I'm  
19 not too sure if you are familiar with the treaty  
20 area that was the territory of the Anishinabe  
21 people. So I guess I will get into my  
22 presentation.

23 I'm a Anishinabe person. I come from  
24 the Keeseekoowenin Ojibway First Nation community.  
25 What I'm going to talk to you about is in regards

1 to treaty. We have been in that area for, as my  
2 presentation states, we have been in this area  
3 for, you know, around the 1700s. And as the  
4 presentation states, we have been in this area, we  
5 have knowledge that there was indigenous people  
6 here before us, meaning the Assiniboine and the  
7 Sioux and the Cree. It was in 1871 that the  
8 treaty commissioner was sent to the Manitoba post  
9 to enter into treaty discussions with the  
10 Anishinabe people.

11 I guess why I wanted to do this  
12 presentation is my great great grandfather was the  
13 one who signed on behalf of the southwestern  
14 Anishinabe people. So I thought it would be  
15 appropriate to come back and let you know my  
16 concerns as a descendant of the treaty  
17 signatories.

18 You know, having stated that, I think  
19 that the treaty was all about, you know, for  
20 settlement and immigration purposes. The  
21 community that I come from today is  
22 Keeseekoowenin, he was Mekus's half brother.  
23 There was two lifestyles negotiated at that time  
24 of the treaty, one was for a modern lifestyle and  
25 one was for a traditional way of lifestyle.

1 Keeseekoowenin was a farmer himself, Mekus, my  
2 great great grandfather lived the traditional way  
3 of life. He lived up in the Riding Mountain until  
4 it became a National Park in 1935. He practiced  
5 his way of living through the traditional  
6 lifestyle. I guess that is why I say there was  
7 two lifestyles being discussed at the time of the  
8 treaty negotiations.

9           And if you wanted to take on a modern  
10 lifestyle, as the speaker who did the presentation  
11 before me mentioned, 160 acres was adequate to  
12 support your family. I think that is why the  
13 treaty, you know, says that. That if you wanted  
14 to get into agricultural lifestyle, that you would  
15 be given 160 acres for you and your family.

16           I think it was about 1867 that they  
17 started to interpret the treaty arrangement,  
18 meaning coming up with, you know, the Indian Act  
19 was developed in 1867, slightly embellishing the  
20 treaty itself, interpreting the treaty itself.  
21 And then we get into what we have been put through  
22 for, you know, whether it be the assimilation  
23 policies of the 1930s, you name it.

24           We have met a number of times in the  
25 community with the elders, the youth, in

1 discussing environmental issues. I think we have  
2 nothing against agriculture ourselves, but I think  
3 we do have some legitimate concerns when some of  
4 those activities will affect the generations to  
5 come, meaning intensified livestock operations.

6 We had a presenter come more than a  
7 week ago and speak to the community members in  
8 regards to some of the environmental impacts,  
9 whether it be from the smell or whatever. I  
10 wasn't aware, you know, what to expect when I came  
11 here this morning. The presenter before me, when  
12 they said that, you know, I hope your intentions  
13 are not to mislead this review committee, that is  
14 not my intention that I come here. So I was  
15 preparing something, you know, to do this  
16 presentation. If you want facts, you know, I will  
17 give you the facts, how long my people have been  
18 in this area. In regards to the treaty, you know,  
19 after the treaty was signed, settlement started to  
20 happen. Not right away, it wasn't until about  
21 1891 that settlement really started to happen.  
22 The treaty was signed in 1871, that is about 136  
23 years ago. My people have been in this area for  
24 307 years, and yet we can see some of the change  
25 in the landscape from some of the, you know,

1 practices that have been going on. You know, I  
2 don't know how long we are going to deny, or be in  
3 denial position saying that, you know, some of our  
4 activities are a detriment to the environment. I  
5 think that is why, you know, I wanted to come here  
6 and state the concerns that we have as a First  
7 Nation community and, you know, go on the record.

8                   So that is why the poster that I  
9 brought here is the treaty boundary of the  
10 Anishinabe people. It goes into the southeastern  
11 corner of Saskatchewan and then, you know, I can  
12 go through -- and how those boundaries were come  
13 up with is the watershed boundaries, meaning all  
14 of the water that drains into the Hudson Bay. I  
15 didn't mean to come and give anybody a history  
16 lesson but, you know, I have to tell you, these  
17 are constitutional rights that are recognized in  
18 the Canadian constitution.

19                   So, having said that, there is a  
20 number of First Nations that are signatory to that  
21 treaty. I think all together there is 19 First  
22 Nations that are in that treaty 2 territory. Not  
23 all are signatory to treaty number 2. Meaning the  
24 Dakota and the Sioux, they are not treaty  
25 signatories to the area. Some of them are agents

1 to treaty 4, but they live in the treaty 2  
2 territory.

3 As the poster says there, there is  
4 Lake Manitoba, Little Saskatchewan,  
5 Keeseekoowenin, Dauphin River, Waterhen, Ebb &  
6 Flow, Fairford, O-Chi-Chak-Ko-Sipi, and Lake St.  
7 Martin, those are signatories to the treaty.

8 I don't know what more I can tell you  
9 right now, other than state our position, give you  
10 the history of our people, how long we have been  
11 in this area, and that at the end we do have some  
12 legitimate concerns that we would hope the panel  
13 will take into consideration.

14 So, I think that is all I have to say  
15 right now. And if you had any questions, you  
16 know, I will do my best to answer your questions.

17 THE CHAIRMAN: Thank you,  
18 Mr. Blackbird. Your concerns that you note on the  
19 second page of the presentation, or the written  
20 part of it, did that barn, did it go ahead? I  
21 seem to recall that it was brought up a day or two  
22 ago by somebody else and it didn't go ahead?

23 MR. BLACKBIRD: It didn't go ahead.

24 THE CHAIRMAN: Did your community  
25 officially, or members of your community, of your

1 First Nation go and make presentations?

2 MR. BLACKBIRD: We did a presentation  
3 to the Strathclair Municipal Council.

4 THE CHAIRMAN: As part of the  
5 conditional use hearing?

6 MR. BLACKBIRD: Yes.

7 THE CHAIRMAN: Okay. I can also add  
8 in respect to general Aboriginal issues and how  
9 our review might impact on treaty rights. At our  
10 very first meeting I think it was, a  
11 representative of the Assembly of Manitoba Chiefs  
12 came and spoke about the necessity of  
13 consultations government to government. I did  
14 consult with the Manitoba Government's person who  
15 is responsible for those consultations and was  
16 informed that as far as -- since we are only  
17 making recommendations to a Minister, we, as a  
18 panel, are not compelled to consult, but we  
19 certainly welcome input such as yours and that  
20 made by this person from the Assembly of Manitoba  
21 Chiefs. And we also have scheduled a meeting with  
22 representatives of the Assembly of Manitoba Chiefs  
23 for mid May to discuss sort of general issues, so  
24 that if there is any area where we should make  
25 recommendations in that regard, we will, if we



1 feel compelled that we should do that. But we are  
2 pursuing with the Assembly of Manitoba Chiefs,  
3 seeking their input into this process.

4 MR. BLACKBIRD: I think, you know, in  
5 regards to consultations, you know, we have always  
6 been, like I said, you know, as much as the treaty  
7 has not been in the full benefit of the First  
8 Nation people, we have an obligation to live up to  
9 that treaty agreement. We signed it with the  
10 Crown letting settlement and immigration happen.  
11 And at that time, you know, we had a very  
12 prosperous lifestyle up until about 1935, when we  
13 were forcibly removed from Riding Mountain  
14 National Park, as we know it today. And like I  
15 said, some of our people are farmers as well. We  
16 have nothing against agricultural people, but we  
17 do have concerns when it is going to have  
18 long-term impacts on the environment. I think  
19 that is when we do become concerned.

20 So I thought I would come here and  
21 state our position. Chief and Council, you know,  
22 have some other things that, you know, but I guess  
23 that is my position there is Treaties and Natural  
24 Resources, that is my job description. So when  
25 something comes up in the area of treaty, that is

1 my responsibility to come and state our position.

2 THE CHAIRMAN: Let me thank you for  
3 coming out this morning. It is interesting to  
4 hear yet another perspective on this whole issue.

5 Edwin, do you have any questions?

6 MR. YEE: No, I have no questions.

7 THE CHAIRMAN: Wayne?

8 MR. MOTHERAL: No.

9 THE CHAIRMAN: So thank you for coming  
10 out this morning, Mr. Blackbird.

11 MR. BLACKBIRD: Thank you for hearing  
12 me.

13 THE CHAIRMAN: Is Al Roagasin here  
14 yet? Are you prepared to go?

15 MR. ROGASIN: Yes, I am.

16 THE CHAIRMAN: Would you state your  
17 name for the record, please?

18 AL ROGASIN, having been sworn, presented as  
19 follows:

20 MR. ROGASIN: My name is Al Rogasin.  
21 I am a retired Professor of Botony from Brandon  
22 University. I have taught plant ecology, that is  
23 one of my main interests. Ecology is all about  
24 environment, interrelations with the environment,  
25 and I have been interested for a long time in

1 environmental issues. I'm not pretending to be an  
2 expert or a specialist in soils or biochemistry,  
3 or any of these areas, but I have attended a  
4 number of hearings, I have talked to farmers, I  
5 have read a fair amount. So I think reasonably  
6 well acquainted with the main issues. And what  
7 I'm going to talk about is not so much a bunch of  
8 facts, but my impressions and evaluations,  
9 particularly from an ecological viewpoint about  
10 the whole hog industry issue.

11           And it must be said that a lot of  
12 these matters have been dealt with before, both in  
13 other sessions of Clean Environment Commissions,  
14 in hearings before the government, legislative  
15 hearings, and in fact some of them even appear in  
16 Hansard. So a lot of this is not new. Most of  
17 what I say is not going to be new. And it kind of  
18 surprises and disappoints me that we have to be  
19 saying things over and over again. One would  
20 think that -- I'm not blaming you, but certainly a  
21 lot of this stuff is on the record, and it would  
22 be valuable for the Commission to start from a  
23 position that is a few steps ahead. It is hard to  
24 be back to square one each time, but nevertheless  
25 I will.

1                   We are talking about sustainability  
2   and the sustainability of the hog industry in  
3   particular. I would like to take a broader view  
4   of what sustainability means than just whether  
5   this particular industry can continue doing  
6   whatever it is doing indefinitely. I think that  
7   one has to, or at least should take into account  
8   other factors that are related to the industry,  
9   environmental factors, the air, the water, the  
10  soil, people's health. All of these I think are  
11  part of the big picture, if you will. And if  
12  anything seriously damages some of these other  
13  factors, whether it is the water or health or what  
14  have you, to me that is not a sustainable  
15  situation, and that is how I view it.

16                   I would like to -- well, I know you  
17  can't see it, but this is the final report of the  
18  Lake Winnipeg Stewardship Board. It is a very  
19  good report in most ways. I would recommend you  
20  reading it. And on it, really, all you can see,  
21  even if you were closer, you see a lot of green, a  
22  loss of forest. It is almost hard to distinguish  
23  Lake Winnipeg from the other green. And what this  
24  satellite photos shows, the green that you see  
25  occupying a fairly good chunk of Lake Winnipeg,

1 basically it represents very profuse growth of  
2 algae, including some that are quite toxic, they  
3 can be toxic to humans, other animals, fish, they  
4 can have serious and do have serious effects on  
5 the fishing industry in Lake Winnipeg.

6 Now, where does that green, where do  
7 those algae come from? Well, basically they are  
8 nourishment, they are nourished by the material  
9 carried in the waters that flow into Lake  
10 Winnipeg. And we are talking here particularly  
11 about the nitrogen and the phosphorous components,  
12 because the phosphorous especially is important, a  
13 critical factor in the growth of algae.

14 About a month ago or so, a Dr. Andrew  
15 Sharpley, who is the sort of North American expert  
16 on phosphorous matters in relation to agriculture,  
17 gave a lecture at the U of M, mostly to Ag people,  
18 soil scientists and others. It was a general  
19 talk. And he pointed out that there was a  
20 Canadian ecologist in the 1970s, David Schindler,  
21 who first did the experiments that showed the  
22 remarkable effect that phosphorous had on the  
23 growth of algae. And he also mentioned this was  
24 taken up quickly, in our knowledge of what is  
25 happening, practices of what is happening in the

1 water, it was taken up and the effect was  
2 recognized much more slowly in agriculture, but  
3 now it is.

4 He also pointed out that it is a  
5 complex matter, the judgment of the amount of  
6 phosphorous that one is supplying with manure.  
7 Because until now, until recently we governed  
8 fertilizer applications largely on the basis of  
9 nitrogen, but that doesn't apply in the same way  
10 to phosphorous. And that is one of the problems  
11 that we have to deal with. And it is a big  
12 problem now.

13 Where does the water come from? Well,  
14 we know very well more than 50 per cent of it  
15 comes, and the phosphorous content of that water  
16 comes up from the States and Red River. There is  
17 some that comes into Manitoba from Saskatchewan  
18 and Alberta, through the Saskatchewan River  
19 system, and some through the Qu'appelle, some from  
20 Ontario, but the greatest part of it within  
21 Manitoba comes from Manitoba sources. So we can't  
22 just blame our neighbors for the water conditions,  
23 we are doing our part in terms of phosphorous  
24 contributions and we are doing it well.

25 Where is that phosphorous coming from?

1 Well, there are a number of sources, there is no  
2 one single villain, if you will have it that way,  
3 to blame. Our capital city, which I may have to  
4 remind people from outside of the perimeter is  
5 Winnipeg, makes great contributions from time to  
6 time through malfunctions of the wastewater  
7 treatment system. And so do other cities and  
8 towns and villages when their water treatment  
9 systems or sewage treatment systems don't function  
10 properly. And that includes even cottagers around  
11 our resort areas who may be using septic fields or  
12 septic tanks, some of which work at least for a  
13 while, but sometimes even septic tanks develop  
14 holes, even bullet holes surprisingly. So there  
15 are problems there.

16           There were also problems from  
17 industrial sources. These are point sources, they  
18 are easier to identify. And there are also  
19 problems, as we know, from agriculture itself.

20           Now, environmentalists aren't singling  
21 out agriculture, but we have to look at all of the  
22 sources. We have to blame ourselves for what we  
23 put into the system.

24           In the previous edition of this lake  
25 stewardship water report, there was an interim

1 report put out in 1903, they showed, they had pie  
2 charts that showed the proportion of phosphorous  
3 and nitrogen content from different sources.  
4 Agriculture all together contributed, within  
5 Manitoba, occupied about, or had about 37 per  
6 cent, actually the largest single chunk of a  
7 particular category for contributing to  
8 phosphorous that ends up in Lake Winnipeg. Of  
9 that, they broke it down further, there is  
10 commercial fertilizer applications, and then there  
11 is phosphorous derived from manure, livestock  
12 manure, cattle and pigs. And here it gets --  
13 there are estimates and there has been a lot of  
14 question about the estimates, and one of the chief  
15 investigators into phosphorous in Manitoba,  
16 Dr. Don Flaten at the U of M, admits in the paper  
17 where they come out with the percentages that  
18 these are based on estimates, there is a lot of  
19 assumptions, and it is not that definite. And I  
20 believe that this is one of the areas where we do  
21 have to put the money into research to get  
22 definite numbers there. But I would point out  
23 also that in the 2003 report, the data for  
24 phosphorous and nitrogen contributions came from  
25 work in 2001.



1                   Now, in 2001 there were roughly two to  
2 two and a half million pigs being produced yearly  
3 in the province. Now, 2006 and 2007, it is up  
4 somewhere between 9 and 10 million. So we are  
5 looking at about maybe a four fold to five fold  
6 increase in the number of hogs. And I think we  
7 can take as a rule of thumb that proportionately  
8 there is probably the same increase in the content  
9 of manure and all that they contribute. So it is  
10 a serious and growing problem, and it impacts on  
11 Lake Winnipeg.

12                   The components of the manure, besides  
13 the nitrogen and the phosphorous, there are some  
14 components which are known as carcinogens, or at  
15 least have the potential to act as carcinogens.  
16 There are heavy metals, there are antibiotics.  
17 Both of these are incorporated in the feed to  
18 reduce the incidence of disease and also to step  
19 up the growth rate of the animals. And it is  
20 particularly serious with the antibiotics in that  
21 when they are applied in what they call sub  
22 therapeutic doses, which allows some bacteria that  
23 happens to be resistant to it to thrive and  
24 multiple, and you end up with antibiotic resistant  
25 bacteria which poses all sorts of problems in

1 health. So there are components of the waste, of  
2 the manure, that have serious, or can have serious  
3 health implications.

4 Now, I would like to look at what some  
5 of the arguments have been with respect to, with  
6 respect to attitudes or points of view expressed  
7 in the industry, basically in the defence of the  
8 industry. Now, there are a number of arguments,  
9 but to me one of the main ones is technology is  
10 going to solve it. You know, we either have or  
11 are developing technology that will settle these  
12 problems. Well, I do not doubt that such  
13 technology, at least to some degree, can be  
14 developed. But to me also the point is, this is  
15 now, and while it is being developed, and if it  
16 gets more widely used, between now and then there  
17 is an unknown period of time, and the processes  
18 which lead to pollution are continuing.

19 What is being done in the industry  
20 that contributes to this? And here I'm referring  
21 mostly to the intensive hog production, the big  
22 barns and so forth. Well, basically, it is like a  
23 glorified plumbing system really. Hydraulic  
24 engineering is a big part of it. And you take  
25 fresh water, which to most people on earth is a

1   precious resource, and you take that fresh water,  
2   you mix it with hog feces and make a slurry, which  
3   is something like a milkshake but a different  
4   flavour. You pump that through pipes to a lagoon,  
5   in most cases an earthen lagoon which doesn't  
6   leak, I'm told that it seeps, it is hard to avoid  
7   that, into the surrounding soil. From there it is  
8   spread on the fields. If it is spread legally, it  
9   won't be spread in winter, but -- I have never  
10  witnessed this myself -- but I hear from friends  
11  in rural areas that sometimes this is done. And  
12  sometimes in extreme cases, I have heard that it  
13  may go right into ditches or bodies of water.  
14  Eventually it will make its way into the  
15  Assiniboine through the watershed system, into the  
16  Red River and Lake Winnipeg. So what we do here  
17  can affect people and animals in the industry in  
18  the Lake Winnipeg area.

19                   Now, from an ecological point of view,  
20  to take a scarce, relatively scarce and precious  
21  resource and use it in this way, I was going to  
22  say that I think this is an ecological crime, but  
23  I won't because I might be slapped on the wrist  
24  for that. I will say it doesn't make any  
25  ecological sense. Now are there any -- why then

1 would such a system be used? My view is that it  
2 is crass profit motive. You can handle, you can  
3 deal with a large number of hogs, maybe thousands,  
4 in big barns, you can deal with them with a  
5 minimum of human labour. You don't need a big  
6 labour force because it is so well mechanized,  
7 automated.

8 Are there other ways of doing this?  
9 Well, certainly one, and basically it is an old,  
10 old, old method, it is straw based and uses  
11 composting. The problems with that is that it is  
12 more labour intensive than moving it through pipes  
13 and that way.

14 Another thing that is done is, in the  
15 expansion of the hog industry, and I'm not  
16 criticizing any one party, I think the big growth  
17 in the industry, or the start of it was during a  
18 Conservative administration, and since a few years  
19 back it has been NDP, but I don't personally see a  
20 big difference in the way they actually operated,  
21 except that the present government has much better  
22 rhetoric.

23 They claim they have the most, you  
24 know, the toughest regulations in the world. I  
25 don't know, it may be true. There are some tough

1 regulations, and there are laws written on paper.  
2 And some of them don't get far from that paper.  
3 The problem is there is a minimum of -- I won't  
4 say a minimum, I would say the actual practices  
5 don't match up to the rhetoric. There is a  
6 shortage of personnel and people in the relevant  
7 departments. Conservation and Water Stewardship,  
8 and the others, you know, will admit sort of off  
9 the record that, you know, they are hard pressed  
10 to do all that they had to do. There really  
11 aren't enough people with background around to do  
12 all of the monitoring that needs to be done.

13           There are problems with some of the  
14 technical review commissions, some of them. And  
15 again I hear this, so I don't know if this is the  
16 truth, but I hear on good authority that a lot of  
17 this can be done in the office, measuring the  
18 setbacks and the plans, rather than being out in  
19 the fields.

20           Also, I think we can't say that the  
21 industry doesn't know what is happening. They  
22 began in the States -- well, the intensive hog and  
23 intensive livestock operations began some years, I  
24 don't know, at least 10 or 12 years, maybe more,  
25 in the States before it started in Manitoba. And

1 in some places like North Carolina, there is such  
2 a mess, if you have seen some of the videos or  
3 films of the areas where they are concentrated, it  
4 is staggering the way the water has been polluted.  
5 Even the governments which initially were for the  
6 hog barns had to do something. Smithfield in  
7 North Carolina, for example, was banned for at  
8 least a few years from building any more barns on  
9 the coastal plain. Smithfield is the largest pork  
10 producer I think in North America. And in other  
11 States there has been, there have been similar  
12 experiences, real problems. So the industry has  
13 to know that, you know, there are problems with  
14 odour, there are very serious problems with water  
15 pollution.

16 So by the time they came up to  
17 Manitoba you would think they would know that  
18 digging earthen ware -- earthen ware, it is not  
19 Tupperware -- earthen lagoons has problems. They  
20 do see the lagoons are often placed and the  
21 spreading done in most inappropriate places. For  
22 example, some lagoons are dug -- I haven't seen  
23 that, but I know people who live right in those  
24 areas and are intimately acquainted with it, there  
25 are some lagoons dug in areas where cattails and

1 bull rushes are growing. I don't know if you are  
2 aware of this detailed knowledge of botany, but  
3 these only grow in places that you get your shoes  
4 wet when you walk through them, they are in water,  
5 or the water table is very close to the surface.  
6 So if there is a leak or spills, what is in the  
7 lagoons has immediate access to the water table.  
8 You know, it is right there.

9           Furthermore, with respect to odour,  
10 there are various measures that have been  
11 recommended, but one very simple technology is,  
12 well, you can put a plastic lid, plastic cover  
13 over it. Now, you think that would work. It  
14 probably would, but it has got one insurmountable  
15 difficulty, it costs money. And so in general,  
16 until forced to do it, generally we don't see  
17 them.

18           It reminds me of what we see, or what  
19 we have seen when seat belts were first proposed  
20 for the auto industry. There was real resistance  
21 on the part of the companies because it was going  
22 to cost another eight bucks per car or something.  
23 But at any rate, these steps weren't taken.

24           Now, in light of that, having lagoons  
25 go into flood plain areas, sometimes they are

1 built on aquifers or immediately over aquifers.  
2 One really good example that is very close to home  
3 is the Assiniboine Delta aquifer, which is a big  
4 sand pile basically left from the glacier. It is  
5 also known as the Carberry Sand Hills. It  
6 contains sprucewoods and all, I think it is the  
7 largest aquifer in Manitoba. The water it gets  
8 comes entirely from rain and snow. It is filtered  
9 through thicknesses of sand. It is pretty good  
10 water to start with. But if you have leakage into  
11 it, or contaminants, and they go into the sand,  
12 the part that isn't taken up by plants is going to  
13 follow gravity, go down into the water table.

14 So here we are taking what is good  
15 water, it is good drinking water quality, you are  
16 using it to make these milkshakes, and then you  
17 are emptying the rest of it. Through one route or  
18 another, it is going to go in that area back down  
19 into the sand and the water table and the river  
20 and all of that. Now, that just doesn't make  
21 ecological sense. It is like using the toilet  
22 bowl and getting your drinking water from it.  
23 They have to do this in the rockets they send up,  
24 but it goes through a better purification system  
25 than we do.



1                   At any rate, in light of what the  
2 industry has done or has not done, I don't have a  
3 great deal of confidence that they are going to go  
4 out of their way in developing the technology.  
5 Furthermore, if the technology is developed, I  
6 don't know this, but I suspect that the developers  
7 are not going to give it away for free, they are  
8 going to want to sell it. And as we see, even  
9 with plastic covers for lagoons, producers aren't  
10 necessarily going to buy it. So there is no  
11 guarantee that that is going to work.

12                   I would like to end up with a quote  
13 from the conclusion of this, this is a very good,  
14 lots of information in that report. My question  
15 is, in light of all of that, where is that wanted  
16 technology that the industry is promoting? From  
17 the conclusion of this final report, it says,

18                   "what we have seen in Lake Winnipeg in  
19 recent years demands our immediate  
20 attention."

21 And then the last two sentences,

22                   "While there are gaps in the  
23 scientific information, gaps that must  
24 be filled, we have enough information  
25 and knowledge to begin the task

1 immediately. We can not afford to  
2 wait."

3 And this comes from a distinguished panel of  
4 experts and various people.

5 Thank you, Mr. Chairman.

6 THE CHAIRMAN: Thank you very much,  
7 Mr. Rogasin.

8 The David Schindler you mentioned, is  
9 he the guy at the University of Alberta?

10 MR. ROAGASIN: Yes. Any more?

11 THE CHAIRMAN: Yeah, I'm just sort of  
12 collecting -- is there a way, or do you know, is  
13 there a way to make lagoons 100 per cent leak or  
14 seep proof?

15 MR. ROAGASIN: I don't know of any  
16 really. Some are lined with plastic, but even  
17 these, they have to be cleaned from time to time.  
18 And I'm told that in the cleaning process they  
19 don't do this with a toothbrush, they use tractors  
20 and equipment, and it is hard to keep from ripping  
21 it in places, it has to be replaced.

22 Also, I think that the regulations  
23 require that the base of the lagoon be clay, which  
24 is much less permeable. But clay comes in a  
25 variety of concentrations, I guess. And it is, I

1 think it has to be carefully supervised to see  
2 that actually the right kind of clay layer is put  
3 down there and maintained.

4 A better system -- and I don't like to  
5 be in the position of advising the industry how  
6 they can better carry on -- but above ground, say  
7 like concrete or steel containers. But let's  
8 remember that one of such containers busted in  
9 MacGregor a few years back, so they are subject to  
10 problems too. But even if they are, even if that  
11 lagoon part of it, or the storage part of it is  
12 dealt with, ultimately you are using the material  
13 on the land. You know, it is spread some ways, it  
14 has got the heavy metals, parasites, antibiotics  
15 and so forth. So there are risks there, and risks  
16 for getting into the tributaries, like the Little  
17 Saskatchewan or the Birdtail or other rivers. So  
18 there are problems with that. And if there is a  
19 sensible way -- and I consider the straw based  
20 composting system a much more sensible system that  
21 has much less of an environmental impact on the  
22 land.

23 THE CHAIRMAN: Some in the industry  
24 would argue that pigs are more susceptible to  
25 disease in straw based systems.

1                   MR. ROAGASIN: I can't comment on  
2 that. All I can say is in any intensive, whether  
3 it is hogs or cattle or chickens or people,  
4 whenever you get a large number of organisms  
5 concentrated in a very limited area, it is ripe  
6 grounds for any kind of disease. And I really  
7 can't comment with any authority on that  
8 particular point.

9                   THE CHAIRMAN: Thank you. Edwin.

10                  MR. YEE: Yes, Mr. Rogasin, you  
11 commented on, and I totally agree with this and I  
12 think it is expressed in the Water Stewardship  
13 report that new data needs to be done, and  
14 certainly we don't want to base things on old  
15 data, but you mentioned the fact that it was based  
16 on 2001 data. I don't think that you can  
17 extrapolate the quantity of phosphate being  
18 contributed to the eco-system just based on a  
19 direct relationship with expansion. I think  
20 because we have heard about phytase and the  
21 reductions, I was just going to get your comments  
22 in terms of perhaps they should really look at,  
23 analytically the content of the phosphates in  
24 manures from all sources and calculate and  
25 estimate volumes that could be released?

1                   MR. ROAGASIN: Absolutely, I totally  
2 agree that that is where the answer has to be. I  
3 would just think that as, you know, a first  
4 approximation rule of thumb, if you triple the  
5 number of pigs, there has to be some increase, you  
6 know, they are not all going to go on a diet or --

7                   MR. YEE: Absolutely. The other  
8 question I have is maybe just to get your comment  
9 on the new phosphorous regulation, the amendment  
10 that came out?

11                  MR. ROAGASIN: I'm considerably less  
12 expert on this, but from people who have done the  
13 calculations, and this has been brought out in  
14 several sets of hearings. Okay, there is  
15 commercial phosphorous which you have to buy, and  
16 because you have to buy it, you are not going to  
17 want to waste it. So, that makes some  
18 contribution by the amount that may escape being  
19 taken up by plants.

20                  With the manure, I wouldn't say it is  
21 exactly free, but there are known concentrate,  
22 phosphorous concentrations within which most crop  
23 plants are grown. And the numbers that I've heard  
24 are, it varies with the crop and type of soil and  
25 so forth, are generally within the range of about

1 20 parts per million to about 60 parts per  
2 million. And I know the farmers would want this  
3 in how many pounds per acre, but I find it easier  
4 to -- people can do the conversion. I think that  
5 the limit that was placed on the, the limit on  
6 phosphorous concentration in the soil, and I think  
7 that Al Beck presented this at one of those  
8 meetings, was around 250 or 260 parts per million.  
9 Now, this is well above -- normally you would want  
10 to add a fertilizer that replaces what the crop  
11 uses and that is removed with the grain or hay or  
12 whatever. If 60 parts per million will do it as  
13 far as the crop needs are concerned, then if you  
14 are allowing 260 parts per million, that is a lot  
15 over. And some of this will build up in the soil,  
16 but ultimately even the soil cannot be  
17 indefinitely saturated, and the excess is going to  
18 run off and going to be a problem. So I can't  
19 really understand why they would take a figure  
20 that is beyond what the crop replacement need is.  
21 I do suspect, in my suspecting mind, that possibly  
22 economics and politics have a bit to do with it,  
23 but it certainly isn't, as far as I know, what the  
24 science says.

25 MR. YEE: Thank you very much.

1 THE CHAIRMAN: Wayne.

2 MR. MOTHERAL: Thank you,

3 Mr. Chairman.

4 Mr. Rogasin, I just made a couple of

5 comments on, again on phosphorous. When you

6 mentioned the different percentages and things

7 that come off and all of that, and I do know there

8 has been several organizations throughout Manitoba

9 that have done some work on, or are continually

10 doing work on this, and one is the Deerwood

11 Association in Southern Manitoba, and also some

12 people in the Whitemouth area I believe have got

13 some facts on that. The one thing that was quite

14 alarming that I heard from the Deerwood

15 Association was they were trying to get the

16 reading of what the phosphorous was coming off

17 land, from agricultural land. And they had a

18 check strip, they checked on coming through just a

19 natural wooded area or something, and they found

20 that the phosphorous on them was far higher than

21 what was coming off the agricultural fields. So

22 that was natural vegetation. This is all included

23 in the agriculture's perspective, so it is going

24 to be difficult with research to separate, if you

25 are going to be measuring what is the phosphorous

1 coming off land, what is natural and what is  
2 coming from agriculture. They are frustrated too  
3 because it is going to be a very difficult task.

4 MR. ROAGASIN: I agree. And it is  
5 puzzling to me as well. But, also, if you look  
6 back at say natural vegetation, natural waters,  
7 the process of plants growing and then decaying,  
8 decomposing, has been going on in this area for  
9 10,000 years maybe. And yet the waters -- like  
10 whether we are talking about the rivers or the  
11 lakes -- don't have, maybe except in certain areas  
12 where there may be high phosphorous, they don't  
13 have the concentrations and increase in  
14 concentrations say that have been measured in Lake  
15 Winnipeg.

16 Now, I would say that a lot has to do  
17 with, you know, where these strips of vegetation  
18 are. It may be, I don't know, this is stuff they  
19 can experiment with, that in the run-off in these  
20 fields that some of the phosphorous is taken up,  
21 like both physically there is a barrier to it  
22 going through the vegetation, and some may be  
23 taken up by that vegetation. And so that it may  
24 be the residual of what has been applied in other  
25 areas. I don't know that.



1 I would like that question -- one of  
2 things that Dr. Sharpley pointed out, they've also  
3 measured phosphorous release from different kinds  
4 of soil and different kinds of topography, and he  
5 showed aerial photographs of these areas. And he  
6 pointed out areas that showed up dark, that were  
7 somewhat moister soils, kind of wet, like within a  
8 field, that these areas had much higher, maybe  
9 most of the run-off of phosphorous in the field  
10 came from those wetter spots, not from the dryer  
11 spots, and the topography made a big difference.

12 And also he pointed out that, now he  
13 is working in the south in Arkansas, and in a  
14 couple of areas that they looked at, there might  
15 be a period of ten years and there wasn't really,  
16 you know, measurable phosphorous coming out. And  
17 then they would have one hell of a rainstorm and  
18 torrents coming down, and when they measured the  
19 phosphorous, boy, it really came out. So a lot  
20 depends on the kind of soil, the degree of  
21 moisture, the topographic situation, and the rain,  
22 precipitation. It is not a simple thing. I will  
23 admit it is a very interesting point, it puzzles  
24 me, and I would like to know the answers.

25 MR. MOTHERAL: One more comment, the

1 time is slipping by. You had made a comment on  
2 the one area where you said you had seen manure  
3 storage in and around cattails. I want to  
4 describe my farm at one time. I have a very high  
5 well drained farm, and after three years of  
6 precipitation, of heavy, heavy participation, I  
7 had cattails all over the fields. So it is not  
8 just low areas, it can happen in high areas too.

9 MR. ROAGASIN: I have seen, not so  
10 much in cattails, there is another big marsh plant  
11 that is called giant leaf grass, it has sort of a  
12 feathery top and very conspicuous. And I have  
13 taken classes out in pothole country, and you will  
14 find some of that growing up on the slope. And  
15 they have runners, it is not seeding there  
16 naturally, they will have runners coming out from  
17 the main colony in the slough, or the edge of the  
18 slough, and it will go out, 30, 40, big distances.  
19 Like Aspen reproduces that way. So they can  
20 travel. But normally when you are dealing with  
21 cattails, bull rushes, that kind of vegetation, it  
22 is wetland vegetation and really is to show that  
23 it is in moister areas.

24 MR. MOTHERAL: That is all. Thank  
25 you.

1                   THE CHAIRMAN: Thank you very much for  
2 coming out this morning, Mr. Rogasin. Before we  
3 take a short break, we have one presenter who will  
4 be coming on right after the break and will take  
5 about an hour to make his presentation. Is there  
6 anybody else in the audience who wishes to make a  
7 presentation today? If so, please let us know  
8 during the break?

9                   We will break now for about ten  
10 minutes.

11 (Proceedings recessed at 10:36  
12 and reconvened at 10:48 A.M.)

13                   THE CHAIRMAN: Let's come back to  
14 order. It is 10:48 a.m. Would you state your  
15 name, please?

16                   DR. WIEBE: Arthur Wiebe.  
17 ARTHUR WIEBE, having been sworn, presented as  
18 follows:

19                   THE CHAIRMAN: Go ahead, sir.

20                   DR. WIEBE: Thank you very much for  
21 inviting me here. I have been invited to speak on  
22 the topic of antibiotic resistance.

23                   As I said, my name is Arthur Wiebe, I  
24 have lived all of my life in Ontario, mostly. I  
25 have been a rural physician for over 30 years. I

1 began practice in Nipigon in Northwestern Ontario.  
2 As you may be aware, this part of Ontario often  
3 feels disassociated from the rest of the province  
4 and there is occasionally talk about joining your  
5 province.

6 THE CHAIRMAN: We will take you.

7 DR. WIEBE: I was going to say, I  
8 wondered if the feeling was mutual, but certainly  
9 we felt that way. Just as an anecdote, I could go  
10 down to Younge Street in Toronto and nobody would  
11 know where Nipigon is, and yet I could be on  
12 Portage Avenue and most of the merchants would  
13 know exactly where I was from. So I have very  
14 warm feelings.

15 My mother's family came from Manitoba  
16 and I spent some of my happiest summer weeks  
17 during my childhood near Elm Creek at my  
18 grandparent's farm. With both parents from the  
19 west, I was indoctrinated into an affection for  
20 the province, and I still cheer on the Blue  
21 Bombers. I even married a prairie girl whose  
22 father began his career as an Anglican priest in  
23 Southern Manitoba.

24 I found this photo in my mother's  
25 collection, and I believe it was, I would guess

1 somewhere during the 1950s, there would be  
2 somebody with an airplane who was taking aerial  
3 photographs of the farm, and I can actually  
4 picture having been in all of those buildings.

5 As a boy, my family would come out  
6 every couple of years to help with the harvest on  
7 the family farm. And when my brother and I would  
8 get underfoot in the fields, we would be sent to  
9 trap gophers, or to kill mice in the granary. And  
10 I understand that many of you have gone through  
11 the same sort of process.

12 As I mentioned, I'm proud to be a  
13 rural doctor. I have had the pleasure of  
14 combining my lifelong passion for the environment  
15 with my professional life. What this slide shows  
16 is is the logo of the Canadian Association of  
17 Physicians for the Environment. We were  
18 recognized in 2006 by Canadian Geographic Journal  
19 for our work on health and the environment.

20 And before I go further, I'm going to  
21 say I'm not going to speak for an hour if I can  
22 help it. My very best clinical professor at the  
23 University of Ottawa Medical School drilled into  
24 us that nobody can listen for one hour, and he  
25 followed his advice, and that stayed with me.

1                   My expertise, as it comes to this  
2 presentation, is not as an infectious diseases  
3 specialist but as a front line health care  
4 provider, where I see antibiotic resistance on a  
5 daily basis in my general practice. I also live  
6 only about 40 kilometres from Walkerton, which  
7 unfortunately made the world news a few years ago  
8 with the contamination of its water supply with e.  
9 coli H70157. I still see patients from Walkerton  
10 in follow-up, and with the expertise, this  
11 unfortunate episode has helped us manage people  
12 with kidney problems, particularly as it occurs in  
13 diabetes, for example. We began using immediately  
14 after that certain tests that everybody frankly  
15 now uses in managing diabetic patients.

16                   I like to understand how things work  
17 so I'm going to start with basic principles, and  
18 partially because I got so excited reading about  
19 them and learning them as I prepared for this. It  
20 was both a review and new learning experience.  
21 Then there will be a survey of some veterinarian  
22 farming use of antibiotics, human medical use of  
23 antibiotics, human and food animal disease  
24 interactions, and perhaps some suggestions and  
25 musings at the end.

1                   Antibiotic resistance is about  
2   artificial and natural selection. I will  
3   introduce the subject of natural and artificial  
4   selection with something larger than bacteria.  
5   The ancestors of these particular horses were  
6   chosen from the stables of Louis the 14th to be  
7   sent to his settlers in New France. That was  
8   artificial selection. A number of them didn't  
9   survive the boat trip. Natural selection. Some  
10  died in the cold of the New World. Natural  
11  selection again. They were bred to plow, pull,  
12  log and ride. Artificial selection. Some died in  
13  the northwest rebellion; probably both natural and  
14  artificial selection. They almost died out after  
15  farm mechanization but are on the way back, both  
16  artificial -- artificial selection goes on.

17                 As an aside, this horse, this breed  
18  was declared our national horse by an act of  
19  parliament in 2002, and these particular animals  
20  are called Ginger, Houston and Rosy. And I mucked  
21  them out before I came here yesterday morning.

22                 Changes in bacteria, that is what we  
23  are talking about when we are talking about  
24  concentrated operations, as well as introduction  
25  of antimicrobial agents. Having a rough idea of

1 how horse breeds develop is one thing, but  
2 breeding of bacteria can be even more complex and  
3 unpredictable than that of larger animals.  
4 Bacteria multiply rapidly, and one cell can be a  
5 colony of millions in a day. This is an advantage  
6 if we want to study changes, but can multiply what  
7 might be a problem to us or other creatures just  
8 as quickly. In addition to natural variation,  
9 which we use in breeding larger animals, bacteria  
10 can manifest mutations much more quickly because  
11 of the rapid reproductive rate. And I have read  
12 that the mutation rate is somewhere between 1 and  
13 a million and 1 in a billion, which sounds small,  
14 except when you realize that that can happen in a  
15 day that something can multiply by a million  
16 times. These are usually selected out of the  
17 breeding pool, but occasionally they are selected  
18 in if they have a survival advantage.

19 In addition, bacteria can have several  
20 forms of what we might call jumping genes. To  
21 imagine this on a larger scale, you might picture  
22 a chestnut horse becoming a pinto just by standing  
23 next to one. That is something like what happens  
24 in bacteria. I will just do some simple  
25 illustrations. This is, if you will, normal, no



1 antibiotics, and the red spots represent those  
2 with resistant genes, resistant to whatever agent,  
3 perhaps antibiotics. If you use the antibiotic,  
4 you kill off all of the sensitive ones but you are  
5 left with the resistant ones. And then in time,  
6 what is left is resistant ones and perhaps a few  
7 normal ones that manage to get away.

8           This slide is intended to show  
9 something that bacteria have that larger organisms  
10 don't. Those are meant to represent two bacteria.  
11 The blue bit represents the DNA that carries the  
12 hereditary information. The little circle is of  
13 particular note in the red bacterium, and that is  
14 something called a plasmid. There are other types  
15 of agents that can carry genetic information and,  
16 in fact, a plasmid carries between two and thirty  
17 genes. So in addition to the blue gene, if you  
18 will, that they both have, the red one is carrying  
19 some additional information. This information can  
20 be shared. So they don't -- it doesn't have to  
21 multiply this information. It is intended to show  
22 how plasmids carrying DNA can be transferred  
23 between bacterial cells. The process likely  
24 occurs often during stress, such as when  
25 antibiotics are introduced. The plasmid may carry

1 a gene coating for antibiotic resistance to the  
2 next bacterium, even if it is a different species  
3 of bacterium. As a matter of fact, an entirely  
4 different type of species of bacterium. A gram  
5 negative rod may be able to transfer a resistance  
6 to a gram positive bacillus. And the way I was  
7 taught, there is quite a difference between them.

8 Dr. Bruce Leven, a biologist at Emory  
9 University, and his wife did an experiment some  
10 years ago. And I quote from the book, "The Beak  
11 of a Finch."

12 " We did a study. My wife took  
13 ampicillin. I took erythromycin.  
14 Within a few days we were both  
15 dominated by a resistant bacteria.  
16 Not only was tetracycline resistance  
17 coming up..."

18 And you will notice that wasn't one of the  
19 antibiotics that they took,

20 "...but also streptomycin, kanamycin,  
21 carbenicillin..."

22 which is one of our last lines of defence in many  
23 infections,

24 "Our bacteria were going from almost  
25 nothing to multi-drug resistance in an

1                   amazingly short period of time."  
2    When we say a short period, they did this  
3    experiment over a matter of just a few days.  
4                   Use of antibiotics in intensive  
5    livestock operations, or in American literature,  
6    concentrated animal feeding operations: In  
7    researching this presentation I used a data base  
8    routinely used by medical researchers, PubMed by  
9    name. When I consulted a veterinarian  
10   epidemiologist to see if this would be a valid way  
11   to do it, he also recommended this process. By  
12   this method one can combine terms such as, for  
13   example, antibiotic resistance and food animal  
14   farming, and bring up publications and articles  
15   that combine these terms, either as a major or  
16   minor factor, but as a significant word among  
17   articles from -- well, actually literally  
18   thousands of them, but you can usually come up  
19   with the order of hundreds that may refer to the  
20   topics that you are looking for.  
21                   I didn't rely for what I'm saying  
22   until the end, when I'm passing some personal  
23   commentary, on any literature produced by the  
24   organic food industry, nor any what you might call  
25   alternative or advocacy literature. I didn't need

1 to. I was amazed by the consensus of the peer  
2 reviewed veterinarian medical literature on use of  
3 antimicrobials in agriculture, as well as in human  
4 medicine.

5                   Antibiotic use in North America:  
6 About 50 to 60 per cent of antibiotic use is for  
7 animals. Estimates vary, and partially, as we  
8 have had some illusion to earlier, there are trade  
9 issues, and sometimes information is not shared as  
10 freely as, well, it is not just shared openly for  
11 probably pretty good reasons. The total use in  
12 animals I have seen varies between 18 to  
13 24 million pounds -- or sorry, 18 to 24 million  
14 pounds or 8 to 11 million kilograms annually.  
15 That may depend on the data used by the particular  
16 researcher in terms of what year. About 10 to 20  
17 per cent is for therapeutic use, that is in  
18 animals that are demonstrably sick or diagnosed as  
19 being sick. And the greatest proportion is in  
20 recently weaned animals, and we have seen  
21 reference to starter rations.

22                   There are a couple of fairly recent  
23 studies that are worth noting as they appear to  
24 illustrate typical use of antibiotics in  
25 agriculture. There was a survey of antibiotic use

1 in swine operations in Alberta published in the  
2 Canadian Veterinary Journal in 2006, 90 swine  
3 farms representing 25 per cent of Alberta's such  
4 farms were surveyed. Antibiotic use was reported  
5 in over 96 per cent of weaners, over 85 per cent  
6 of growers, and in 60 per cent of finishers in  
7 their feed. Often multi-drug regimens were used,  
8 and that would mean more than one antibiotic.

9 A report referred to from the U.S. in  
10 this article described use of almost 60 per cent  
11 in growers, so it is a little bit less, but I  
12 would say comparable numbers, because a number of  
13 these surveys were based on voluntary information.

14 One thing I found interesting, after  
15 reading a few of the journals, is that about 30  
16 per cent of producers used antibiotics in  
17 finishing operations, although it seemed to be the  
18 consensus in some parts of the world that this was  
19 not cost effective. One comment that might be  
20 made was that when antibiotics were used to  
21 improve growth rates and feed efficiency, they  
22 were found to be most effective when good animal  
23 husbandry was not being practiced.

24 From my point of view, and perhaps you  
25 with your physicians, the analogy that I can use

1 is when we prescribe cholesterol medications. If  
2 I prescribe cholesterol medications to somebody  
3 who has only a 2 per cent risk of having a  
4 myocardial infarction in the next 10 years, adding  
5 cholesterol medication will contribute a very  
6 little bit of extra survival capacity, whereas if  
7 I give a cholesterol lowering medication to  
8 someone who has 40 per cent chance of having a  
9 myocardial cardiac infarction in the next 10  
10 years, the benefits will be much better. I am not  
11 sure how prevalent this is as a factor here, but  
12 it does make sense.

13 The authors expressed some  
14 satisfaction that some of the newer antibiotics  
15 were not being used. I'm not so happy with the  
16 possibility of antibiotic resistance in only the  
17 older, cheaper antibiotics, leaving only the  
18 expensive risky ones for human use. Some, such as  
19 the quinolone, should not be used in children, for  
20 example.

21 I have a dual population, if you will,  
22 in my practice. I live next to the Bruce Nuclear  
23 Power Plant, I live in a farming community that  
24 was opened as the Queens Bush when our  
25 municipality was incorporated in 1857, which means

1 that the farmers cannot afford the new  
2 medications. That is why I keep samples.

3 So I have trouble with, I have seen it  
4 expressed by a couple of the academics that they  
5 think, oh, it is great that we still have some  
6 good antibiotics, but they are in fact they are  
7 ones that are out of reach of many of my patients.

8 The authors felt that there was a  
9 clear indication for stopping non therapeutic use  
10 of antibiotics in finishing operations, thereby  
11 decreasing the risk of drug resistance. That was  
12 in the particular Alberta study.

13 There are so many studies documenting  
14 the bacteria, including the antibiotic resistant  
15 bacteria in the soil and water, that it seems  
16 fairly obvious that this does occur. One that I  
17 found interesting, because it was a little  
18 surprise to me, was what happens in the air.

19 Because an intensive livestock  
20 operation produces the waste of a small town at  
21 least, it isn't hard to see how antibiotic  
22 resistant bacteria can be found in water and soil  
23 associated with these operations. Because our  
24 world isn't sterile, we can understand how traces  
25 of antibiotic resistant bacteria can be found in

1 meat sold at retailers. That is one reason why we  
2 don't eat raw meat. Studies have been fairly  
3 consistent that there are antibiotic resistant  
4 bacteria on the retail shelves. That really  
5 shouldn't be a surprise and it is not necessarily  
6 a comment of any particular carelessness.

7 But researchers at John Hopkins School  
8 of Public Health report finding a surprising  
9 number of resistant bacteria in the air of a  
10 concentrated feeding operation for swine. They  
11 suggests a risk to humans and presumably swine  
12 from breathing this air.

13 The human food animal connection:  
14 There are numerous other studies showing drug  
15 resistant bacteria in animals raised for food,  
16 with speculation on risks to human health, but has  
17 it actually happened or is it just a possibility?  
18 In other words, is there a smoking gun?

19 Interestingly, after I wrote this, I encountered  
20 an editorial from the New England Journal of  
21 Medicine which in fact uses the same phrase.

22 There are surprisingly few studies,  
23 possibly because the research methodology is so  
24 expensive, but there are some. Studies in the  
25 Netherlands and France have shown that people



1 working with swine have some of exactly the same  
2 bacteria as their animals, and in many cases these  
3 are, for instance, methicillin resistant,  
4 staphylococcus aureus, which is one of the things  
5 which we also test everybody for when they come to  
6 our hospital, which means we can't use some common  
7 antibiotics if they get an infection. And there  
8 have been instances of serious human health  
9 effects, such as babies being hospitalized.

10 Quite probably farm workers may cause  
11 infection in their animals, it goes both ways, we  
12 are both inhabiting the same place. And that  
13 obviously is one reason for biosecurity measures.  
14 And I do live in a rural area. As I drove down  
15 the highway to come to the airport in Toronto  
16 yesterday, I did a rough count and there were  
17 between 25 and 30 livestock operations visible  
18 from the highway that I drove. So I'm aware of it  
19 and I'm aware of biosecurity signs at the farm  
20 gate.

21 So summing up, when animals and/or  
22 humans are crowded together the risk of disease  
23 increases. The professor before me made an  
24 allusion to this. Swine are almost all raised in  
25 intensive operations at this time. When exposed

1 to antibiotics, bacterial colonies will inevitably  
2 develop resistance. As I say, I stress  
3 inevitably. Bacteria, including resistant ones,  
4 are passed between species.

5           Some conclusions: Diseases can be,  
6 have been, and will continue to be passed between  
7 human beings and species we raise for food. The  
8 chances increase by the way we raise our food  
9 animals. We don't know exactly how antibiotics  
10 are being used in livestock. There are wide  
11 variations in practice, and no monitoring other  
12 than sample studies. And I would say I'm not  
13 pointing the figure at veterinary and agricultural  
14 practices. It is disturbing to me that in the  
15 medical profession most studies are funded by the  
16 industry, the government seems only too happy to  
17 pass off the duty of doing research. And it is  
18 not that the studies are done poorly. I guess my  
19 main concern is that the studies that aren't being  
20 done, and the studies that are being done but not  
21 being released. And, of course, we won't know  
22 about those.

23           I'm going to read just some of the  
24 comments here. I almost feel like a plagiarist  
25 because there is things that I could have written

1 in the abstracts for a number of these articles.  
2 This is from the Preventative Veterinary Health  
3 Journal by David Wolinga out of Minnesota.

4 "With antimicrobial resistance  
5 mounting, an important public health  
6 goal is to preserve therapeutic  
7 effectiveness of remaining  
8 antimicrobials. To that end, fewer  
9 antimicrobials should be used in human  
10 medicine and agriculture."

11 In the New England Journal of Medicine, which is  
12 arguably the most prestigious in the English  
13 speaking world, I think between the Lancet in  
14 Britain and the New England Journal, those are the  
15 two most prestigious in the English speaking  
16 world. The editorial was, "Antimicrobial Use in  
17 Animal Feed, Time to Stop." The editorial  
18 concludes with a few paragraphs.

19 "The most widely proposed argument in  
20 favour of the use of antimicrobials  
21 for growth promotion and feed  
22 efficiency in animals is the economic  
23 savings. There are alternatives, as  
24 shown in Europe, after the use of  
25 these drugs was abandoned. The

1 economic losses could be minimized and  
2 even neutralized by improvements in  
3 animal husbandry, the quality of feed  
4 and hygiene."  
5 Dr. Gorbach, the editor continues,  
6 "In my view the findings of..."  
7 and he quotes three other authors, White,  
8 MacDonald and Sorenson,  
9 "...along with the abundant supporting  
10 evidence provided by previous studies  
11 represent the proverbial smoking gun.  
12 On the basis of discussions by an  
13 expert committee of the alliance for  
14 the prudent use of antibiotics,  
15 several recommendations can be made.  
16 Antimicrobials should be used only  
17 when indicated in individual infected  
18 animals for a targeted pathogen and  
19 prescribed by a veterinarian. The use  
20 of certain drugs that have important  
21 uses in humans such as  
22 fluoroquinilones and third generation  
23 cephalosporins should prohibited in  
24 animals. Finally, the sub therapeutic  
25 use of these agents to promote growth

1 and feeding efficiency should be  
2 banned; a move that will decrease the  
3 burden of antimicrobial resistance in  
4 the environment and provide health  
5 related benefits for both humans and  
6 animals."

7 From the Preventative Veterinarian Medicine  
8 Journal, Dr. Wolinga, and this has to do with  
9 policy. There has been a statement that we need  
10 more science. There is some suggestion that we  
11 don't -- not that we don't need more science, but  
12 some of it may be impossible to get the certainty  
13 that we are looking for. He says,

14 "Usage data are non essential in  
15 achieving the public health goal.  
16 European success at phasing out the  
17 unnecessary antimicrobial use in  
18 agriculture has derived from decisions  
19 based on public health concerns and  
20 political will."

21 As an example, the hotel that I stayed in has  
22 banned smoking in all rooms. This is a matter of  
23 public health policy, but it is an example of  
24 public health policy in the absence of rigidly  
25 controlled trials that smoking causes illness. We

1 all accept that smoking causes illness, but we  
2 haven't done a trial, where we have had a  
3 controlled trial where we force some people to  
4 smoke and others don't on a randomized basis, but  
5 we accept it as good public policy.

6 So somebody insisting on exhaustive  
7 scientific proof is perhaps insisting on the  
8 impossible. A judgment call will have to be made.

9 From the Journal of Clinical  
10 Pharmacology,

11 "The World Health Organization has  
12 unveiled a plan for tight restrictions  
13 on antimicrobial use in humans and in  
14 food animals to combat the problems of  
15 microbial resistance, with the  
16 development of guidelines to reduce  
17 overuse and misuse of antimicrobials  
18 in food animals. Veterinary public  
19 health is one frontier in the fight  
20 against human disease..."

21 the author goes on.

22 Warnings: We frequently hear warnings  
23 of impending pandemics. I know that precautions  
24 are being made, for instance, even in the form of  
25 a veterinary reserve to deal with localized

1 outbreaks of pandemics. I just learned this  
2 actually from our own veterinarian a couple of  
3 days ago. Many predictions of one form of  
4 disaster or another have come and gone and I am  
5 wary of these, I am not going to say the sky is  
6 falling in. Nevertheless, any public health  
7 specialist that I have heard has repeated the  
8 mantra, it is not if, it is when a pandemic  
9 strikes. I have heard it from Dr. Butler Jones,  
10 Canada's Chief public health officer, Dr. Donald  
11 Lowe, the hero of the SARS outbreak, and my own  
12 medical officer of health. Dr. Lowe pointed out  
13 that SARS was not a particularly contagious germ  
14 but that it had caused a particularly serious  
15 illness and that its spread depended on human  
16 crowding. The parallel with antibiotic resistant  
17 bacteria is not hard to see.

18 I get the Guardian Weekly and in the  
19 issue at the end of March there was a small  
20 article that said,

21 "A multiple drug resistant form of  
22 plague has been identified prompting  
23 fears of outbreaks that cannot be  
24 contained by antibiotics."

25 I'm not going to pretend that swine are going to

1 give us the plague. But plague frankly is present  
2 in North America, and we are trained that when we  
3 see it, we are supposed to be able to treat it  
4 with erythromycin. This obviously is no longer  
5 the case.

6 I would like to emphasize that when it  
7 comes to antimicrobials and bacteria that there  
8 are no new antibiotics for practical purposes, and  
9 there is a good business case for that. The  
10 reason is largely what I have talked about, the  
11 fact is that any new product is going to become  
12 rendered useless if it is marketed well. If a new  
13 antibiotic comes out and the drug reps come to my  
14 office and others like me and market it well, I'm  
15 going to prescribe it a lot. The more I prescribe  
16 it, the sooner the inevitable resistance will  
17 occur. If I were interested in profits in the  
18 drug industry, I also wouldn't be interested in  
19 working on antibiotics. There is very little  
20 future in them. The future lies in things for  
21 chronic diseases or for cosmetic causes, if a  
22 profit is what you are talking about.

23 There have been some suggestions that  
24 I have come across, better surveillance, and there  
25 has been some mention of this. We don't know the



1 scope of the problem. Some European countries  
2 have tried to identify it and they have  
3 regulations. Denmark is one that came up, and I  
4 believe the Netherlands and Sweden as well.

5           Legislation: The same idea that  
6 certainly you can legislate. For instance, in  
7 human medicine we have reportable diseases, so  
8 there are a number of diseases that we are  
9 obligated to report to the public health  
10 authorities.

11           More biosecurity; certainly I couldn't  
12 argue with that. I know there are many farms that  
13 we can't visit, and frankly I have not been inside  
14 an operation, even in my capacity as coroner, if  
15 there were some reason to go inside, that is the  
16 only way I could get in. The biosecurity is  
17 practiced pretty actively.

18           Education for those raising and caring  
19 for animals: One of the recommendations for the  
20 centre for disease control in Georgia was that  
21 they have actually -- they actually have a  
22 suggested veterinary curriculum. I asked my  
23 veterinarian, who happens to be the same age as my  
24 son, whether that has happened. It hasn't  
25 happened as far as he knows.

1                    Changing methods of animal husbandry;  
2    and I'm not going to tell the farmers how to do  
3    that.

4                    We can't deny that there is a problem.  
5    Every day I see patients that have bacterial  
6    infections resistant to some antibiotics. Most of  
7    these are likely due to medical prescriptions.  
8    Tomorrow when I go back to my office I'm going to  
9    be facing a culture report on a patient of mine  
10   who has tubes where nature didn't intend them to  
11   be and gets frequent infections. Between his own  
12   sensitivities to antibiotics and the resistance of  
13   the microbes, I don't know what choice I will have  
14   as far as treating the infection that he likely  
15   has at this time.

16                   Some infections are harder to explain.  
17   My hospital was recently closed to visitors  
18   because of vancomycin resistant enterococci or  
19   VRE. Where did it come from? We don't know. We  
20   assumed it was because we were prescribing these  
21   things in the hospital, and in some places in the  
22   U.S., most people who have VRE have been in the  
23   hospital. But in a number of other locations VRE  
24   is present in the general population, people who  
25   have not been in hospital, so they have acquired

1 it from another source.

2 Are there other viable ways to farm?

3 If not, are there safer ways, are there ways to  
4 make farming more viable and safe?

5 I might mention that actually just  
6 yesterday, as I checked my mail before I came  
7 here, I received a routine communication from the  
8 medical, one of the medical laboratories that does  
9 our testing. And they tell me now that looking  
10 for common strep, as in strep throat, there is a  
11 18 to 15 per cent resistance of strep to  
12 erythromycin, which would be my drug of second  
13 choice if somebody came with a documented case.  
14 But if they were allergic to penicillin, I  
15 couldn't use my drug of first choice.

16 The four laws of ecology; there is a  
17 little bit of tongue in cheek here, but I think  
18 there is a truth. Everything is connected,  
19 everything goes somewhere. And that is why when I  
20 hear discussions about lagoons that are containing  
21 something, it doesn't sort of disappear, it has to  
22 go somewhere. There is no free lunch and nature  
23 bats last. That is what we are talking about when  
24 we are talking about antimicrobial resistance in  
25 bacteria.

1 I'm associated with the University of  
2 Western Ontario Faculty of Medicine and Dentistry,  
3 and I'm not sure, I don't think we are unique now  
4 in the country in having a significant part of our  
5 curriculum devoted to the environment and health.

6 We do have a program, and actually the  
7 students have told me it is a substantial part of  
8 their program. What this is predicated on is that  
9 you can not have healthy human beings in an  
10 unhealthy environment.

11 I'm going to depart a little bit from  
12 my academic reading. The whole issue of  
13 antibiotic use in farming has come up because of  
14 the issue of crowding or intensive livestock  
15 operations, or as well as crowding among humans,  
16 as was mentioned earlier. This issue is largely  
17 driven by the industry. But what about the other  
18 end of the chain, the consumer? The consumers  
19 have indicated a steady increase in demand for  
20 organic foods, at a rate of growth of, most  
21 estimates exceed 10 per cent. They are willing to  
22 pay more for this. But Canadian producers cannot  
23 meet the demand, so most of our organic food is  
24 imported. A major obstacle to producer conversion  
25 to organics is the transition, which is three

1 years plus. But those of you who are more  
2 familiar with soils than me, know that some soils  
3 take a long longer to become healthy. And income  
4 falls during this time, and there is a very steep  
5 learning curve which also reduces income.

6 So-called conventional farming relies  
7 on indirect taxpayer subsidies. For example, feed  
8 inputs depend on grain, which depends on nitrogen  
9 fertilizer. Nitrogen fertilizer depends on  
10 natural gas flowing through taxpayer subsidized  
11 pipelines and over taxpayer subsidized highways.  
12 The waste nutrients of so-called conventional  
13 operations may end up in our waterways and  
14 taxpayers will end up paying for the cleanup.

15 The editor the New England Journal of  
16 Medicine also suggested in his editorial that in  
17 fact there is a significant cost associated with  
18 antibiotic resistant bacteria, and that has to be  
19 shared by both the food industry and the health  
20 care industry.

21 Organic agriculture doesn't rely on  
22 these subsidized inputs and the farmers clean up  
23 after themselves. What we have is not a level  
24 playing field.

25 As one of your recommendations, I

1 suggest this committee could recommend some  
2 leveling of the field by offering income  
3 stabilization or other financial measures to  
4 enable farmers to meet both consumer demand for  
5 organic products from Canadian products, and to  
6 protect public health. A recommendation of this  
7 would take nothing away from current so-called  
8 conventional practices, but allow consumers more  
9 freedom of choice and utilize the free market  
10 economy.

11           Canadians of all political stripes are  
12 thinking more ecologically, as are many  
13 physicians. Bringing this thinking into food  
14 production should be a given. Thank you very much  
15 for your attention.

16           THE CHAIRMAN: Thank you for your  
17 time, Dr. Wiebe.

18           I'm not sure you can answer this. You  
19 said there was a need for more surveillance, but  
20 how -- do you have any idea how big a problem pork  
21 production is in leading to antibiotic resistance?

22           DR. WIEBE: Well, the majority, as I  
23 say, if you give antibiotic, it is inevitable that  
24 the survivors are resistant, it is also by  
25 definition that if I take an antibiotic, whatever

1 is left is resistant.

2 Pork production, I can't say.

3 Certainly the majority of the samples that were

4 taken in the studies were antibiotic resistant.

5 As far as how much of an effect on human health,

6 you get estimates, they are just ballpark figures

7 in terms of millions or billions of dollars of

8 excess care.

9 THE CHAIRMAN: I'm not a scientist or  
10 trained in medicine. We've heard from some of the

11 presenters before us in the last few weeks, we

12 have heard, for example, that when they deliver

13 their hogs to a processing plant, Maple Leaf here

14 in Brandon, for example, if there is any

15 antibiotic residue, not only are those hogs

16 rejected, but that particular farmer is sort of

17 cut off for up to a year in supplying that plant.

18 Would this -- would antibiotic residue sort of

19 equate to antibiotic resistance?

20 DR. WIEBE: No, I think it is a

21 different issue, that is somebody who has been

22 using it in the finishings stages, and my

23 understanding is that most producers don't do

24 that. That is why I was a little surprised after

25 having read that basic premise that, in fact,

1     there were quite a few people using it in the  
2     finishing process, but they would have to stop  
3     before they were delivered for slaughter in a  
4     sufficient period of time so there wouldn't be  
5     residues. But surveys done in supermarkets of  
6     bacteria that are present on meat of different  
7     kinds do show a significant -- there is going to  
8     be bacteria there, the world isn't a sterile  
9     place, and I accept that. In fact, I think it can  
10    be a healthy thing, but a surprising number of  
11    those are antibiotic resistant, the ones that are  
12    found. And I don't think it is because -- I don't  
13    think the two issues are related, I think one is  
14    just a matter of some, I don't know, some  
15    producers mistiming things, if that is the case.  
16    And certainly I think most producers would  
17    recognize it would be a great economic  
18    disadvantage to be caught that way.

19                   THE CHAIRMAN: I will let -- Edwin.

20                   MR. YEE: Yes, Dr. Wiebe, thank you,  
21    it was a very enlightening presentation. And I  
22    realize the overuse of antibiotics and the  
23    resulting resistant bacteria that is being created  
24    is pretty much widespread, not only on the animal  
25    side but on the human side. But you specifically



1 mentioned about monitoring, and one of your  
2 slides, your suggestions for better surveillance.  
3 Do you have any recommendations in terms of  
4 surveillance, and I guess in particular because  
5 our panel is looking at the hog production  
6 industry, do you have any suggestions there on how  
7 we would do better surveillance?

8 THE WITNESS: I honestly can't say  
9 specifically. But I would look at jurisdictions  
10 where they have a program of surveillance. And I  
11 didn't see too many Danish articles in the English  
12 literature, although, frankly, I just touched on  
13 them. So that would be my suggestion, is to go to  
14 places where they do it. My understanding is the  
15 Netherlands has a fairly exhaustive way of dealing  
16 with illness in animals, and Denmark seems to be  
17 mentioned in a number of the papers printed in  
18 North America.

19 MR. YEE: In terms of changing animal  
20 husbandry practices, can you elaborate a bit more  
21 on what you see as being more appropriate in  
22 combatting the resistant bacteria?

23 DR. WIEBE: Well, again, I don't want  
24 to tell farmers how to do things, but I know  
25 reading a veterinary epidemiologist who has

1 written for veterinarians at Guelph, and written  
2 for the Popular Press, Dr. Toews, it comes down to  
3 more room, fresh air, fresh water, and get rid of  
4 your waste. Those are the general principles. As  
5 far as implementing them, I would like to think  
6 that people can be creative in doing that.

7 MR. YEE: Thank you.

8 THE CHAIRMAN: Wayne.

9 MR. MOTHERAL: I have one comment,  
10 Mr. Wiebe. We have heard it several times where  
11 the risk of disease increases in crowded areas.  
12 And we've also heard areas, some presentations  
13 where the larger barns have a lower mortality rate  
14 than some of the smaller ones and the more natural  
15 ones. Do you have any numbers at all to -- is it  
16 an impression or do you have any numbers to say  
17 that there is more --

18 DR. WIEBE: No, I don't have any  
19 numbers, and I'm aware that even in organic  
20 operations with free range, you know, these things  
21 happen. But if somebody is practicing there, and  
22 they cull those animals, they are gone rather  
23 than -- because you can't use the antimicrobials  
24 on them intensively the way you would, as I say,  
25 particularly in a weaner operation. But, no, I

1 don't have the numbers to answer your question.

2 THE CHAIRMAN: Just following up on  
3 that point, we heard, I think it was yesterday,  
4 that animals kept outside, or hogs anyway kept  
5 outside, that they are much more susceptible to  
6 disease than those that are kept inside,  
7 particularly on concrete where it can be kept a  
8 lot cleaner.

9 DR. WIEBE: Yeah, I don't know. I  
10 know there are parasites out there. As I say, I  
11 know in my horses I know there is strongylosis out  
12 there, and I suppose if they were in an operation  
13 where their feces all fell through a trap, that  
14 wouldn't be the case. As I say, there are --  
15 certainly the people using big operations are not  
16 being careless. They are aware that they have to  
17 keep their product coming out as healthy as they  
18 can.

19 THE CHAIRMAN: We heard a presentation  
20 yesterday from a veterinarian that I found  
21 enlightening and almost astonishing in just how  
22 clean operations are kept. I sort of thought that  
23 sometimes we might want our hospitals to be as  
24 clean as his operation sounded.

25 DR. WIEBE: Well, then you would have

1 to keep out the visitors.

2 THE CHAIRMAN: Good point. On that  
3 note -- on that note, I want to thank you very  
4 much for taking the trouble to come out here to  
5 Brandon from Southern Ontario.

6 DR. WIEBE: Yes, from Kincardin,  
7 Southwestern Ontario.

8 THE CHAIRMAN: Thank you very much for  
9 coming here and making this presentation today.

10 Now, is there anybody else in the  
11 audience who is dying to make a presentation?  
12 Okay. We will be here until noon. If anybody  
13 else shows up and wishes to make a presentation,  
14 we will hear them. If not, that will bring our  
15 hearings in Brandon to a close. We reconvene on  
16 Wednesday at 1:00 in Portage la Prairie. Thank  
17 you.

18 (PROCEEDINGS RECESSED AT 11:32 A.M.

19 AND RECONVENED AT 11:45 A.M.)

20

21 THE CHAIRMAN: Are you ready to go?

22 Could I have your attention, please?

23 We have one more presenter who just walked in a  
24 moment or two ago. So we will come back to order  
25 and hear from this gentleman.

1                   Sir, could you please state your name  
2                   for the record?

3                   DAVID WILLIAMS BARNES, having been sworn,  
4                   presented as follows:

5                   THE CHAIRMAN: Go ahead, sir.

6                   MR. BARNES: Thank you very much. Am  
7                   I limited in time?

8                   THE CHAIRMAN: Well, 10 or 15 minutes,  
9                   is that enough?

10                  MR. BARNES: Yes. I speak  
11                  extemporaneously, I do not have written notes.  
12                  Thank you for accepting me here this morning and  
13                  listening to what I might have to say on the  
14                  subject of industrial production of hogs in  
15                  Manitoba. I speak as a citizen, not as a member  
16                  of any organized group. I do not wish to be  
17                  considered an "ist" of any kind, either  
18                  environmental, or social, or a commune.

19                  I wish to speak on behalf of the  
20                  animals in our confinement system of industrial  
21                  agri business. I will not call it agriculture  
22                  because it is not. And on their behalf I would  
23                  like to say that confinement, large scale  
24                  confinement raising of hogs is inhumane. By that  
25                  I mean not only damaging to humans, but damaging

1 to all forms of life. And I feel that hogs, in  
2 fact, all industrially produced animals, are not  
3 beneficial to our health because of the stresses  
4 placed upon these animals in the facilities which  
5 we use to house them, and by the very fact that  
6 they are treated as units of production and  
7 kilograms of meat rather than as living,  
8 breathing, functioning parts of tissue of our  
9 precious eco-system and the well of life which  
10 supports us. I wish to complain on their behalf  
11 that industrial agriculture is wrong.

12 Now, that is not speaking to science,  
13 and the scientific aspects I'm sure are well  
14 documented, and I would like to point out that I  
15 believe, although I am not a trained and  
16 functioning scientist, I do believe that we are  
17 wreaking havoc with our environment by the way  
18 that we produce animals in industrial confinement  
19 conditions. I would like to point out that the  
20 track record of the hog industry on the North  
21 American continent is one of moving into  
22 relatively naive political jurisdictions, such as  
23 our own, say six years ago, and convincing the  
24 local business and government that industrial  
25 scale hog production is valuable because it can

1 turn a quick profit, or it can be profitable in  
2 certain economic measures. And I do believe that  
3 this profit is at the expense of the environment.

4           And as the industry has moved across  
5 North America from North Carolina, up through  
6 Quebec and into Manitoba, we have seen  
7 jurisdictions of people finally becoming aware of  
8 the toxicity of their environment, the relatively  
9 increasing toxicity as time goes by. And then we  
10 see restrictions and regulations come in to play  
11 in the hog industry, and their confinement systems  
12 and their lagoon systems become more and more  
13 regulated and therefore uneconomic, and industry  
14 moves on.

15           And here they are in Manitoba now, and  
16 we believe that we have the most concentrated hog  
17 population in North America, and that we are  
18 producing hogs as fast as they have ever been  
19 done, and in the greatest conditions of  
20 confinement that are possible known to the  
21 standards of the industry today. And we are  
22 seeing a concomitant pollution of our surface  
23 water. And it seems to me that we are reaching,  
24 we are approaching the point where citizens have  
25 become alarmed enough, that they have become angry

1 enough and express themselves enough that the  
2 industry is feeling some pressure from citizens.  
3 And I do thank the opportunity that I get as a  
4 citizen to stand up and say this. It strikes me  
5 that we are playing ridiculous games, that we are  
6 allowing industrial principles to co-opt life on  
7 the planet in far too many ways, and this is just  
8 one small one.

9           The industry is certainly well placed  
10 to move somewhere else where consumers and  
11 regulators are far more naive, and I am sure that  
12 within five or ten years that will be  
13 accomplished, after our soil has been depleted and  
14 our living conditions on the surface of the land  
15 have been reduced, and our citizenry is  
16 sufficiently active and vocal, then the industry  
17 will move on and take over large proportions of  
18 Brazil and other places where governments are  
19 actively ready to welcome them.

20           I believe that phosphorous testing in  
21 effluent and in surface waters need to be  
22 incredibly more, there needs to be so much more  
23 attention given to phosphorous testing in surface  
24 water. I don't believe that our government is  
25 doing a serious job of regulating and testing the



1 land application of effluent, or of manure, if you  
2 wish to call it that, from hog facilities. It  
3 strikes me that we need to have a much more  
4 concentrated system of regulation.

5 I do protest the fact that the  
6 government is involved not only as a proponent in  
7 the hog industry, but also as a primary financial  
8 backer of the hog industry, and also in the  
9 regulation and subsequent penalization of  
10 producers. I don't think that the government can  
11 play all of those roles, and I don't think that  
12 they are acting sufficiently, clearly, and  
13 decisively in regulation and control. I believe  
14 that our industry is just doing what it likes, and  
15 I believe that we need to seriously stiffen  
16 penalties and increase the amount of the  
17 regulatory force on the surface, testing our hog  
18 production facilities and what they do.

19 Thank you for having me speak today.

20 THE CHAIRMAN: Well, thank you for  
21 coming out. Edwin, any questions?

22 MR. YEE: No.

23 THE CHAIRMAN: Wayne?

24 MR. MOTHERAL: No.

25 THE CHAIRMAN: Thank you very much,

1 Mr. Barnes, for coming out this morning. Just got  
2 in under the wire. Anybody else? Okay.

3 MR. GIESBRECHT: Well, I will make a  
4 short statement.

5 THE CHAIRMAN: State your name for the  
6 record?

7 MR. GIESBRECHT: Dan Giesbrecht.

8 DAN GIESBRECHT, having been sworn, presented as  
9 follows:

10 MR. GIESBRECHT: I am simply here  
11 because I intend to live in this world, as do all  
12 of you. And I'm simply stating that this cannot  
13 go on. As soon as you take a patch of land and  
14 stick up an industrial hog barn in it, stick your  
15 contaminated sloughs all around it, you have raped  
16 the land, you have destroyed it completely, and it  
17 will take far too long for anyone in this room,  
18 including myself, to ever see that land returned  
19 to its original state, a state which will let it  
20 deal with some of the pollution that we as humans  
21 create, some of the pollution.

22 The natural world can help us take  
23 care of ourselves, but we need to take care of it  
24 as well, and there is no way that we can do that  
25 if we insist on business is business and business

1 must grow. Industry and nature cannot co-exist,  
2 so I'm simply here to say, please do not allow  
3 this to happen to our world, please do not kill  
4 everything that we all hold very dear. Thank you.

5 THE CHAIRMAN: Thank you very much.  
6 Okay. Anybody else? Okay. Well, we will be here  
7 another five minutes, perhaps someone else might  
8 come in at the last moments. If anybody comes by  
9 noon, we will hear them, otherwise we will be  
10 adjourned. Thank you.

11 (Adjourned at 12:00 o'clock)

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CERTIFICATE

I, CECELIA REID, Court Reporter, in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of my Stenotype notes as taken by me at the time and place hereinbefore stated.

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Cecelia Reid

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