

MANITOBA CLEAN ENVIRONMENT COMMISSION

HOG PRODUCTION INDUSTRY REVIEW

TRANSCRIPT OF PROCEEDINGS

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Held at the Recreation Centre

Whitemouth, Manitoba

TUESDAY, APRIL 10, 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 Tuesday, April 10, 2007

2 Upon commencing at 1:02 p.m.

3

4 THE CHAIRMAN: Could we come to order,
5 please? I ask you to take your seats.

6 Good afternoon. My name is Terry
7 Sargeant. I'm the chair of the Manitoba Clean
8 Environment Commission as well as the chair of
9 this panel. With me on the panel are Wayne
10 Motheral and Edwin Yee.

11 I would like to welcome you here this
12 afternoon. I have a few opening comments to make,
13 and then we will proceed with hearing from a
14 number of people who have indicated they wish to
15 make presentations this afternoon.

16 By way of opening comments, the Clean
17 Environment Commission has been requested by the
18 Minister of Conservation to conduct an
19 investigation into the environmental
20 sustainability of hog production in Manitoba. The
21 terms of reference from the minister direct us to
22 review the current environmental protection
23 measures in place relating to hog production in
24 Manitoba, in order to determine their
25 effectiveness for the purpose of managing the

1 industry in an environmentally sustainable manner.

2 Our investigation is to include a
3 public component to gain advice and feedback from
4 Manitobans. This is to be by way of public
5 meetings in the various regions of the province to
6 ensure broad participation from the general public
7 and affected stakeholders.

8 We have also been asked to take into
9 account efforts under way in other jurisdictions
10 to manage hog production in a sustainable manner.
11 Further, we are to review the contents of the
12 report prepared by Manitoba Conservation entitled
13 "An Examination of the Environmental
14 Sustainability of the Hog Industry in Manitoba."

15 At the end of our investigation, we
16 will consider various options and make
17 recommendations in a report to the Minister on any
18 improvements that may be necessary to provide for
19 the environmental sustainability of hog production
20 in this province.

21 To ensure that our review includes
22 issues of importance to all Manitobans, the panel
23 has undertaken to hold 17 days of hearings in 14
24 communities throughout agri Manitoba. These
25 meetings will continue through April. Today is

1 the ninth meeting that we have held. We have
2 eight more after today. The final meeting is
3 scheduled for Winnipeg on April 27th.

4 It is open to any groups or
5 individuals to make a presentation to this panel
6 on issues related to hog production in Manitoba.
7 For the most part, presentations are to be limited
8 to 15 minutes. Exceptions may be made in some
9 cases where a presenter needs more time and where
10 the presenter has arranged, made prior
11 arrangements with the Commission secretary.

12 Anybody making a presentation will be
13 asked to take an oath promising to tell the truth.
14 Presentations should be relevant to the mandate
15 given the Commission by the Minister and to issues
16 described in the guide to public participation in
17 this review. If a presentation is clearly not
18 relevant, it may be ruled out of order, and if it
19 is repetitive, it may also be ruled out of order.

20 Members of the panel may ask questions
21 of any presenter during or after the presentation.
22 There will be no opportunity for other presenters
23 to question or cross-examine presenters.

24 In addition to the public meetings,
25 the CEC has engaged a number of consultants to

1 assist us in this review. The results of those
2 research endeavors will be posted on our website
3 as they are received by us. For the most part, we
4 expect that to be in late June.

5 Parties will be invited to provide
6 comment on any of those reports, if they so wish.
7 A reasonable, albeit brief period of time, will be
8 allowed for such comment. Written submissions
9 will also be accepted. Information as to how to
10 submit written submissions is available on our
11 website. The deadline for written submissions is
12 May 7th.

13 We also realize that many people are
14 reluctant to make presentations in public for a
15 variety of reasons. To address this, we have
16 engaged a University of Manitoba student to meet
17 with or talk on the phone with people who would
18 rather not speak at these meetings. Those
19 conversations will be kept confident. Information
20 as to how to contact her is available on our
21 website as well as at the table at the back of the
22 room.

23 Finally, some administrative matters.
24 If you wish to make a presentation today, I would
25 ask that you register at the table at the back of

1 the room. Also, as is our normal practice, we are
2 recording these sessions. Verbatim transcripts
3 will be available on line in a day or so. You can
4 find the link from our website.

5 In respect of cell phones, I would ask
6 that they be turned off, or the ring tone turned
7 off. If you must take a call, please leave the
8 room, although if you have the luck that we have
9 had with our cell phones, we don't receive them
10 out here.

11 Finally, I would ask that you not
12 engage in any conversations while people are
13 making presentations. If you must talk, I would
14 ask you to please leave the room.

15 Okay. The first person that we have
16 on the agenda for this afternoon is Mr. Cal Dirks.
17 Would you please introduce yourself for the
18 record?

19 MR. DIRKS: My name is Cal Dirks.
20 CAL DIRKS, having been sworn, presented as
21 follows:

22 THE CHAIRMAN: You may proceed,
23 Mr. Dirks.

24 MR. DIRKS: I would like to, first of
25 all, thank the CEC, the Clean Environment

1 Commission, for an opportunity to make a
2 presentation today.

3 I'm a pullet farmer in the RM of
4 Hanover near Steinbach, and I'm making a
5 presentation in Whitemouth today as I will miss
6 the opportunity to present in Friedensfeld due to
7 other commitments this week.

8 My farm is also on a small acreage,
9 similar to farms in this municipality. Our farm
10 was established by my father in 1962, when he
11 received approximately 10 acres of land from the
12 neighbour in lieu of wages. He then built a free
13 run pullet barn in 1966. In 1974, he converted
14 from floor raised pullets to cages, as this was a
15 move to a cleaner environment for pullets
16 resulting in less disease challenge and enhanced
17 liveability.

18 After I purchased the family farm in
19 1987, I operated the farm until 2001, when I
20 undertook another upgrade to a dry manure cage
21 system. This resulted in another substantial cost
22 for an entirely new manure handling system. I
23 would just like to add that it was at my cost and
24 without any funding assistance, i.e, APF funding
25 and so on.

1 I now have the latest, most up-to-date
2 pullet raising cages available. This new cage
3 system meets the current code of practice standard
4 of adequate growing space per bird, increased
5 water and feed space, and superior air quality for
6 the birds. We have recently adopted a national on
7 farm safety food protocol which focuses on
8 biosecurity, regular sampling of feed and water,
9 and other best management practices related to the
10 housing of pullets. This cage system has also
11 reduced the volume of manure and odour, as it is
12 dry manure with no water added like the previous
13 liquid manure system. And we have constructed a
14 large covered manure building to store up to 12
15 months of manure. As a result, we are able to
16 spread in spring or fall, according to current
17 manure management guidelines.

18 I have arrangements with the
19 neighboring farms to take the manure and spread it
20 appropriately, as my land base is too small for
21 the 230 waste units of manure produced by my
22 pullet operation each year. This is valuable
23 organic fertilizer, and the neighbors recognize it
24 as such and utilize it for their crops.

25 In order to address some questions we

1 had about farming on a small acreage, I took the
2 sessions required to complete my Environmental
3 Farm Plan and was certified in May of 2006. This
4 has been a valuable exercise. We live close to
5 our pullet farm, so our well is close to our barn.
6 Our septic field is close to our house, and our
7 fuel storage is on the farmyard next to the
8 storage sheds. And as you can picture, my farm is
9 like many other farms in Manitoba.

10 We have been challenged through the
11 Environmental Farm Plan process to make best
12 management practices a priority. These efforts on
13 my farm should ensure sustainable farming while
14 respecting the environment we live in. My family
15 and whoever operates this farm in the future will
16 benefit from the best management practices on my
17 farm.

18 I would like to conclude by
19 encouraging the CEC and the Province of Manitoba
20 to consider the huge strides made by farmers who
21 have embraced the Environmental Farm Planning
22 process. This has been a substantial commitment
23 financially, and sends the important signal to the
24 public and the Government of Manitoba that we are
25 concerned about the environment. We are willing

1 to do our part, along with cities and towns,
2 cottage owners, and what I call ruralites, that is
3 people who chose to live in the country, to ensure
4 Manitoba water and environment are protected.

5 Thank you.

6 THE CHAIRMAN: Thank you, Mr. Dirks.

7 How much land do you use in spreading?

8 MR. DIRKS: We will use somewhere
9 around 160 acres of land over the year, or over
10 actually several years.

11 THE CHAIRMAN: So a total of 160?

12 MR. DIRKS: Yes, approximately.

13 THE CHAIRMAN: So you apply it on some
14 one year --

15 MR. DIRKS: Yes, depending on what the
16 crop rotation. There is some forage crops, mostly
17 corn.

18 THE CHAIRMAN: Do you have, or do you
19 anticipate having any trouble? Do you have a long
20 term arrangement to apply your manure?

21 MR. DIRKS: Yes.

22 THE CHAIRMAN: So it is not a problem?
23 Hanover, we know is fairly heavily populated with
24 livestock operations.

25 MR. DIRKS: Yes. But I think

1 transporting manure is a challenge, the distance,
2 because of the cost. So most of the farms are
3 looking to work together and utilize the lands
4 closest to the livestock production area farms and
5 so on.

6 THE CHAIRMAN: But there is, at least
7 to date there is enough land available in your
8 area for --

9 MR. DIRKS: Yes, in my region, yes.

10 THE CHAIRMAN: -- for all of the
11 farmers, at least to your knowledge?

12 MR. DIRKS: To my knowledge, yes.

13 THE CHAIRMAN: Thank you.

14 MR. MOTHERAL: Just to follow up on
15 Terry's questioning, Mr. Dirks, on this 160 acres
16 that your neighbour utilizes the chicken manure,
17 do you know, does your neighbour soil test?

18 MR. DIRKS: I believe he does, yes.

19 MR. MOTHERAL: It is something that we
20 have been noticing throughout the province, that
21 the requirement with the new phosphorous
22 regulations, et cetera, they require soil testing.
23 The Environmental Farm Planning process, of
24 course, this is just a comment, we have been
25 getting good comments about that throughout the

1 whole province. It is something that you can
2 self-evaluate yourself, you can self-evaluate your
3 operation and there is good things coming from
4 that. I think that is all I have. Yes.

5 THE CHAIRMAN: Edwin?

6 MR. YEE: Yes. Mr. Dirks, just one
7 question. In terms of the proposed new
8 phosphorous regulations, do you see a significant
9 impact respecting your operation?

10 MR. DIRKS: I guess that will depend.
11 It will depend on the, you know, if there is any
12 expansion in our area. We are not expanding, but
13 I'm totally surrounded by, or primarily I should
14 say surrounded by beef, dairy farmers, and there
15 will be some smaller hog operations in my
16 immediate area, but predominantly we are beef and
17 dairy. So it will depend, I guess, on the type of
18 expansion in their industry. And they are going
19 to have some challenges too, definitely, of how to
20 handle their dry manure.

21 MR. YEE: Thank you.

22 THE CHAIRMAN: Thank you, Mr. Dirks.

23 Next is Eva Pip. Will you identify
24 yourself for the record, please?

25

1 MS. PIP: My name is Dr. Eva Pip, and
2 I'm from the University of Winnipeg. I am a full
3 professor and my area is toxicology and water
4 quality.

5 THE CHAIRMAN: Thank you.

6 EVA PIP, having been sworn, presented as follows:

7 MS. PIP: Ladies and gentlemen,
8 Commissioners, we are here to address an issue
9 that is a huge issue -- we are here to address a
10 huge issue which will be a much greater concern as
11 time goes on, especially with projected climate
12 change and also the water resources in this
13 province that are very, very important. And we
14 are particularly blessed in this regard that we
15 have these resources, whereas many other areas of
16 the world and even of Canada do not. And
17 therefore, it is morally incumbent on us to
18 protect these resources as much as possible, and
19 that any activities that we undertake have the
20 most minimal possible impact on these resources.

21 So even though this is such a huge
22 topic and we could do a week's worth of
23 presentations on this, there are a few things that
24 I would like to highlight for the Commission this
25 afternoon. And the first thing that I would like

1 to speak about, I would like to first address the
2 general impact that our human activities here in
3 Manitoba have on our surface water quality.

4 Over a three-year period we did a
5 large sampling survey of surface waters in all of
6 Manitoba, and this went all of the way from the
7 U.S. border, up as far as Churchill and Tadule
8 Lake in Northern Manitoba. And basically what we
9 did, we looked at 425 sites in Manitoba, and there
10 sites were selected randomly using GPS. And then
11 we identified the actual location at ground level,
12 and whatever the nearest surface water was and
13 also how accessible it was, that was what we
14 sampled. And we also noted the kind of human
15 impact that seems to be the most predominant
16 impact affecting that particular water body. So
17 we divided our human activity categories into
18 minimal use, which was the least possible impact.
19 Of course, in Manitoba we no longer have such a
20 thing as pristine, there is no area of the
21 province that is unaffected by our activities, but
22 at least minimal use meant that there was no
23 particular development, as such, in the vicinity.
24 We also looked at cottages, recreation, crop land,
25 livestock, poultry operations, logging, clearing,

1 mining, hydroelectric development, and urban
2 effluent. And what we found, we divided up the
3 province into the five major geographic areas
4 which are very different in terms of physiography
5 and also geology and soil chemistry. So we found
6 that the two categories that we will be concerned
7 with here today, namely crop land and livestock
8 and poultry -- livestock and poultry, these were
9 actually barns in the vicinity. Crop lands, of
10 course, includes both inorganic fertilizer applied
11 and manure. And we couldn't, short of going to
12 interview the individual farmers, we really
13 couldn't distinguish between the two, the
14 inorganic fertilizer and the manure, and in some
15 cases there were combinations of both. So we
16 lumped them together into a single category.

17 So this table shows the per cent
18 frequencies of these human activities that we
19 encountered. Remember, this was randomly chosen
20 sampling locations according to computer generated
21 random GPS numbers. So we found that the greatest
22 frequency of agriculture, as you would expect, was
23 on the southern flood plain, primarily the Red
24 River basin. And so in this area we also had the
25 greatest frequency of livestock operations.

1 Now, when we are talking about
2 livestock operations, these turned out to be
3 roughly 60 per cent hog barns, and the remainder
4 were cattle, chicken, poultry, sheep, bison. But
5 the majority of them turned out to be hog
6 operations, so we found quite a few of them in the
7 southern flood plain area. And then we also had
8 in Southwestern Manitoba, of course, a fair bit of
9 crop land activity, and we also had a fair
10 proportion of actual barns.

11 So when we looked at the primary
12 impact categories among these 425 sites, we found,
13 first of all for total dissolved solids, that all
14 of our human activities -- I will just explain
15 this number in a moment, this low number --
16 perhaps I will explain it now. This low number is
17 a function of where hydroelectric development is
18 located in our province, which means primarily in
19 remote areas, northern areas, where it already is
20 on the Precambrian shield. Precambrian shield
21 waters inherently have low total dissolved solids,
22 and so where these developments are located, of
23 course, you would see these low values because of
24 the underlying bedrock where we have the hydro
25 dams. But other than that, we have the minimal

1 activity there. And so we found that in logging,
2 same thing here, eastern Manitoba, we found for
3 livestock and crops that we had a significantly
4 demonstrable impact in terms of total dissolved
5 solids.

6 Now, when we looked at nitrate, this
7 was NO3 nitrogen, the most soluble and therefore
8 directly assimilable form. Now, we found that the
9 greatest impact on the surface waters in Manitoba
10 was in areas where we had livestock operations.
11 And then of course, well, we had urban effluent,
12 here also another one of the two greatest impacts.
13 So in terms of nitrate contamination of our
14 surface waters, those two were identified as the
15 two main impacts in terms of contributing nitrate
16 to our surface waters. Of course, nitrate is a
17 concern, because when you have excessive
18 quantities of nitrate in drinking water, this can
19 pose a health hazard because of the
20 methemoglobinemia. And we know in areas in the
21 Interlake, for example, where numerous wells have
22 had to be taken out of commission because of
23 excessive nitrate values. Currently that
24 guideline level is 10 milligrams per litre of
25 nitrate nitrogen. And also if you consume

1 drinking water over a long period of time with
2 nitrate in it, it also significantly increases
3 your risk of gastric cancer and other related --
4 so this is a problem from the health standpoint,
5 but also it is one of the two major nutrients that
6 contribute to algal blooms which I will talk about
7 just in a few minutes.

8 Dissolved organic matter, here the
9 minimal had a fairly high value, and the reason
10 for this was simply because boggy areas where you
11 have -- or wetlands which are characterized by
12 normally occurring high levels of dissolved
13 organic substances, those are also the areas which
14 are considered least useful for other human
15 activities. So we saw this reflected in that
16 fairly high value for minimal, but other than
17 that -- okay, for logging it went up, because
18 again you have now increased erosion, especially
19 with clear cut, so that contributed more dissolved
20 organic matter. And then here about, sort of
21 intermediate, we had the livestock and crop land.
22 Urban effluent though significantly raised
23 dissolved organic matter content. And of course
24 dissolved organic matter is important because it
25 ties into the dissolved oxygen levels and

1 therefore health of aquatic ecosystems.

2 Now, when we looked at cadmium, okay,
3 we looked at three heavy metals, so cadmium,
4 obviously here, okay, mining had the greatest
5 impact, but otherwise not really a statistically
6 difference. Urban effluent was somewhat elevated,
7 but the agricultural values were in line with the
8 other human activities.

9 Now, when we look at lead, however,
10 compared to the minimal human impact sites, okay,
11 minimal like hydro who were the lowest, we had
12 urban effluent and logging contributed the most
13 lead to surface waters, but we also saw
14 significant elevation of lead compared to minimal
15 impact sites for the agricultural areas, the
16 livestock, the barn, the areas impacted by
17 livestock barns, and also areas where you had
18 fertilized crop land.

19 Now, when we looked at copper, here we
20 had of course mining, the greatest impact; urban
21 effluent, a fair amount; then we had livestock and
22 crop land which were still higher than the minimal
23 impact. So there was some contribution of copper
24 from agriculture.

25 And so when we rank the importance of

1 the major human activities in the province on the
2 quality of surface water in Manitoba, for total
3 dissolved solids, we could still identify
4 significant effects for livestock production. For
5 dissolved organic matter again, livestock was a
6 significant effect. For nitrate, the two most
7 important human activities that impact on nitrate
8 in our province are urban sewage effluent,
9 followed by livestock production. In cadmium,
10 livestock didn't really have much, didn't figure
11 much here. For lead, though, we still had a
12 statistically significant effect for lead. And
13 then copper, livestock were not -- so nitrate was
14 the most important factor of the parameters that
15 we looked at.

16 Now, when we broke this down according
17 to the five different physiographic regions of
18 Manitoba, what we found was that you still had for
19 nitrate, okay, when you look at these mean values,
20 these are the ranges, these are the mean values,
21 so we found that central Manitoba, which is your
22 Interlake area, and followed by the southern flood
23 plain and southwestern Manitoba, these were the
24 three physiographic areas of Manitoba that were
25 the most susceptible, that was showing the

1 greatest effects of nitrate contamination due to
2 human activity.

3 So now when we broke this down even
4 further, if we looked now at the importance, the
5 relative importance of the human impacts in
6 relation to individual physiographic regions, we
7 found that in central Manitoba, which is primarily
8 the Interlake area, the two most important
9 determinants were livestock production and
10 domestic sewage, and these contributed the most to
11 nitrate. In the Red River basin again, livestock
12 was an important contributor, in addition to land
13 clearing and crop production, in terms of
14 dissolved organic matter. And you can see that
15 the statistical significance, very, very high in
16 this physiographic region.

17 And then we found the most vulnerable
18 waters to contamination were streams, so the small
19 water bodies, in other words, were also the most
20 vulnerable, the most susceptible to contamination
21 in all regions except in Northern Manitoba where,
22 of course, the main activity there was mining, so
23 the other activities really we didn't have enough
24 to do a statistically significant comparison. But
25 unfortunately, even though streams were the most

1 susceptible to contamination, 63 per cent of the
2 livestock sites that we encountered were located
3 on streams, and these were the areas where they
4 should least be, where it is least appropriate to
5 locate them.

6 The most vulnerable region was the
7 Precambrian shield because of the low total
8 dissolved solids, low total alkalinity that is
9 characteristic of this region. The rocks in this
10 region don't contain a lot of soluble salts. So
11 surface waters in the Precambrian shield will
12 range in the order from 100 milligrams per litre
13 all the way down to less than 10 milligrams per
14 litre, which is as close to distilled water as
15 natural waters can get. So these waters also have
16 the least buffering capacity when it comes to
17 being able to inactivate and bind with
18 contaminants. So the Precambrian shield should be
19 the last area that we should be considering when
20 we allow these developments there.

21 Now, in terms of the soil types that
22 we had at these sites, well, only just over half
23 of all of the livestock operations sites were
24 located on clay soils, which are, as we know, the
25 most appropriate types of soils, but only half of

1 the developments were located on these soils; 26
2 per cent were located on sand and gravel which is
3 highly, highly inappropriate for these types of
4 operations, and yet they were still allowed there.
5 Clay soils were the most likely to show high total
6 dissolved solids and metal levels in overlying
7 water. So what this means is when we do locate
8 them on clay soils, we locate them on clay soils
9 because they are the least permeable. They still
10 are permeable, but at least they are the least
11 permeable to leaching and water flow. But at the
12 same time, when you have clay soils and water
13 overlying, these kinds of soils also contribute a
14 great deal of total dissolved solids and metal, so
15 there is a great deal of transfer of these
16 contaminants to overlying water, even when these
17 operations are on clay soils.

18 Organic soils, of course, were highly
19 correlated with dissolved organic matter and
20 overlying water, this is what you would expect.
21 And then nitrate showed the greatest elevation on
22 clay soils on the Precambrian shield. And so
23 again this tells us that we should not be locating
24 operations that generate nitrate in the
25 Precambrian shield area.

1 Now, when we did multi-area analysis
2 of this, the most vulnerable were the small water
3 bodies to contamination, streams and ponds. So we
4 define ponds as ten, the cut-off was ten hectares.
5 So these, again, the smallest water bodies show
6 the greatest impact, because you have the least
7 dilution volume available. On the Precambrian
8 shield, streams were significantly vulnerable for
9 all of the parameters that we looked at, no matter
10 what it was, the streams showed contamination the
11 most readily. In the Red River basin, streams
12 were most vulnerable to nitrate and dissolved
13 organic matter. In southwestern Manitoba streams
14 were most vulnerable to dissolved organic matter.
15 Regions with the greatest frequency of livestock
16 production were also the regions where nitrate and
17 dissolved organic matter contamination of surface
18 water were most evident. So this indicated that
19 livestock production has already had an impact on
20 our surface water. With the current levels of
21 production, we have already produced an
22 identifiable impact. And so this should give us
23 pause to think, if we are going to expand any
24 more, that we have to think very, very hard how we
25 are going to do this, if we are going to do this,

1 because we already have a demonstrable impact.
2 And unfortunately, the impact cannot be reversed,
3 you can not clean this water up once it is
4 contaminated. And remember, this applies to
5 surface water only. Okay. The groundwater is a
6 whole other issue.

7 All right. So then we did another
8 study, and what we did -- now, we were concerned,
9 we had demonstrated that in normal years of
10 precipitation there is an impact associated with
11 livestock production on surface water in Manitoba.
12 So then we were interested, in view of climate
13 change and the projected increased frequency that
14 we can expect for storm events and unusual
15 precipitation events, what impact does this have
16 on the water quality? And so what we did, we
17 looked now this time just in Southern Manitoba,
18 because this is, of course, where the livestock
19 productions are found. And we compared so-called
20 normal precipitation summer and high
21 precipitation. So we took two normal years in
22 order to have a wider comparison base. And so we
23 combined 1998 and 2001, which were sort of normal
24 years. So the precipitation in 1998 was 435;
25 2001, 497 ml from January to September, because we

1 stopped the sampling in September. This, of
2 course, was at the Winnipeg airport where you can
3 get these measurements, and so you have to
4 appreciate that in different areas of the province
5 this would have varied somewhat from these
6 numbers, but still it was overall whatever you
7 would consider as a normal precipitation year.

8 Our flood year was 2005 where it was
9 547 millimetres, that was again measured at the
10 airport. And beautifully for our purposes, this
11 precipitation was not in the form of snow, which
12 then we would have to study the impact of snow
13 melt, but it was actually concentrated in June and
14 July as rainfall events. And, therefore, as
15 rainfall events, you can really have a nice cause
16 and effect relationship, that soon after it rains,
17 that is when you should be able fairly soon to
18 see, if there is any impact on the surface water,
19 you should be able to see it fairly soon. So the
20 impacts of high precipitation events, of course,
21 they can be snowfall, followed by rapid spring
22 melt, and I will address what happens in that just
23 in a moment, or you can have what we had in this
24 study, high summer precipitation and acute
25 rainfall events. We have to remember that for the

1 immediate future, these sorts of events are likely
2 to increase with the climate change cycle. And
3 the most affected areas, of course, will be where
4 you already have a high water table because high
5 precipitation can raise the water table above the
6 surface of the ground.

7 Such as in my area, for example, where
8 I live it is quite low, the water table is just
9 two to three metres below the surface, so when we
10 have a wet year everything is in water and you
11 have basically an island.

12 Where it slopes, where you have faster
13 run-off, where you have drains, like municipal
14 drains going across fields or where people have
15 made their own drains to get the water off faster
16 from their fields, where you have very little in
17 the way of vegetated buffer zones to help retain
18 the run-off, the intensity of it. Where you have
19 shallow soils, especially here in eastern Manitoba
20 this is a concern because we start to get now, the
21 bedrock now starts to come quite close to the
22 surface, so you don't have the depth there. And
23 also where you have flood plains, because you have
24 to remember that when you have high precipitation
25 events, and especially if you have a flood like we

1 had in 1997, all of the barns, all of the lagoons
2 get washed out and everything gets dumped into
3 Lake Winnipeg. And so it doesn't matter how much
4 we have dyked it or, you know, when you have a
5 flood event like that, all of that material ends
6 up eventually in the lake.

7 So what we did, now we looked at total
8 dissolved solids where we compared the non-flood
9 seasons and the flood season. I should mention
10 here that the number of sites that we looked at
11 was 106 sites. So we sampled these 106 sites in
12 these years, and in this year, and so we found for
13 the urban, okay, in the flood season, total
14 dissolved solids went up. In cottage areas total
15 dissolved solids went up. In crop land, total
16 dissolved solids went up. These are the ranges
17 here, by the way. So you had a big range here.
18 And then livestock, again, it more than doubled in
19 terms of total dissolved solids. And that was
20 just a difference of just a little bit over 100
21 millimetres of precipitation between those two
22 types of seasons, yet we more than doubled the
23 total dissolved solid impact to the adjacent
24 surface water.

25 Now, when we looked at nitrate, okay,

1 for the urban, this was the only one that actually
2 went down. And the reason for that was that with
3 increased storm water going into the sewers, you
4 are actually diluting the nitrogen that was in the
5 sewage, because you still had the same amount,
6 actual amount of sewage going into the system.
7 But it increased storm water, you diluted this a
8 bit. But for recreational areas, this didn't
9 work. You increased. For crop lands, so this --
10 I put here a note chemical and manure fertilizer,
11 because we really couldn't distinguish enough
12 between them -- so for crop land, big increase.
13 And then for livestock, again, it actually doubled
14 in the higher precipitation, the precipitation
15 year compared to the so-call normal precipitation
16 year. So precipitation is a very, very important
17 factor in terms of escape of substances, dissolved
18 substances into the adjacent surface waters.

19 So now we looked at soluble reactive
20 phosphorous, which is orthophosphate, that is the
21 most immediately uptakable form of phosphorous in
22 terms of algal growth, and it is the most soluble
23 form of phosphorous. So here we found, okay, this
24 was not a statistically difference here, there was
25 hardly any difference here between flood and

1 non-flood years for phosphorous. We increased a
2 bit again here, but not statistically significant
3 for cottages. This was statistically significant,
4 so for crop land we did have a statistically
5 significant increase in phosphorous. And for
6 livestock operations, same thing, statistically
7 significant increase in terms of the amount of
8 phosphorous that was coming off into the surface
9 water.

10 Dissolved organic matter increased,
11 and this probably -- you had increased leaching of
12 leaf litter and whatever with the higher
13 precipitation; for the cottages, increased; for
14 crops, increased quite a bit. And then we also
15 had some increase here for the livestock
16 operations. So all of the categories showed an
17 increase when you had flood versus non-flood
18 years.

19 So the results of flooding on adjacent
20 surface water, high rainfall associated with
21 increased nitrate soluble reactive phosphorous,
22 total dissolved solids, and dissolved organic
23 matter in adjacent waters. Smaller water bodies,
24 and this again echoed the results of the first
25 study, smaller water bodies showed higher

1 increases than larger water bodies, again because
2 of the dilution capacity of the receiving water.
3 And then this multi-variant, analysis of variants
4 identified both land use and water body type as
5 significant determinants for chemistry water
6 impact. And this is something that is very
7 important for us to bear in mind. When we do
8 planning, where do we allow certain operations,
9 where don't we allow? So we have to consider what
10 water, what kind of water body type it is, in
11 addition to the geographical region of Manitoba,
12 where it is located.

13 Here is something that was of great
14 concern. 10 per cent of our 106 sites actually
15 showed more phosphorous than nitrogen in the
16 surface water. And so this indicates that
17 phosphorous is way in excess, and I mean really
18 enormously in excess, to the point where when you
19 are talking about its capacity to stimulate algal
20 blooms that it no longer becomes the limiting
21 factor in waters like this. So in 10 per cent
22 nitrogen actually now becomes the limiting factor
23 compared to phosphorous. So this again echos that
24 we have to consider both nitrogen and phosphorous
25 when we are talking about nutrient escape into our

1 surface waters.

2 And then, of course, the findings of
3 this study were just about the same as these
4 people, this was a European study. And so what we
5 found was pretty well the same as what they found
6 there in Europe.

7 Okay. Now, what can we do for
8 reduction of nutrient escape? Of course, we have
9 to have means of containment of run-off from barn
10 property, and you would think this would be like a
11 no brainer, but you would be -- well, maybe you
12 wouldn't be surprised how many, you know -- well,
13 I will show you in some of the slides later.

14 Okay.

15 So we have to have dykes in place in
16 the event of future lagoon overflow, liner
17 failure, storage and rupture, so that we don't
18 have these instances that we seem to have every
19 year where you have the super giant spill and it,
20 you know, makes its way right to the nearest
21 stream, and people are running around because
22 there have been no contingency plans in place to
23 anticipate these events. There should be
24 monitoring wells that are mandatory for intensive
25 livestock operations, mandatory permanently

1 vegetated buffer zones around barns and spread
2 fields. What this means is, like in a lot of the
3 applications that have come forward, the operator,
4 the proponent proposes to plant a shelter belt.
5 Well, A, just a shelter belt won't do it; and B,
6 it will take how many years for that shelter belt
7 to actually grow to an appreciable size? So in
8 the meantime you have to have some interim
9 measures until that vegetated buffer zone becomes
10 established. There should be no drains directly
11 into ditches or municipal drains. But
12 unfortunately this is something that we see far,
13 far too frequently. We have -- again, I will show
14 you some slides later.

15 Spreading setbacks from ditches and
16 drains; currently we find that in many instances
17 these are not respected. And again, I will show
18 you some slides later where, you know, it is not
19 at all unusual to see manure disposed directly in
20 ditches.

21 Sediment traps in weirs and culverts
22 to retain particulates, because a lot of nutrients
23 are bound to the particulates in soil, and so when
24 you are losing soil particles with erosion or
25 run-off, you are also losing a fair proportion of

1 bound nutrients.

2 And no dribbling of manure on
3 roadways, again, this is currently not respected.
4 Again, you can run into this a lot. Okay. And
5 that will come later, more in monitoring and
6 enforcement.

7 Now, nutrient escape reduction, there
8 should be more than one soil sample per quarter
9 section of land. A lot of soil testing has just
10 one sample, which is completely inadequate. I
11 myself have a 40-acre piece, and I have like six
12 different soil types on my own little bit of land.
13 And so that is completely -- well, pretty well
14 meaningless if you just use one soil sample to
15 represent a whole quarter. There should be GPS
16 location of soil samples so that the documentation
17 indicates exactly where that soil sample was
18 taken, and if verification is needed, that can
19 then take place. If there is something strange --
20 for example, there have been instances that I'm
21 aware of where a soil sample was taken before the
22 manure was spread on the field, then another soil
23 sample was taken after spreading, and the second
24 soil sample showed levels, nutrient levels far
25 below those of the first soil sample. And so that

1 obviously was something that would need to be
2 verified. Periodic sampling should be done at
3 stated depths below the surface, especially if
4 manure is being applied repeatedly, again and
5 again on the same piece of land.

6 This is the other thing that I wanted
7 to mention, that I myself have seen instances
8 where soil samples submitted for testing were
9 taken from a completely different piece of land
10 from the one that they were supposed to be. Soil
11 sampling should be subject to random independent
12 verification, so that goes back to the GPS there.

13 In a flood season the nutrients are
14 not utilized by crops, so they escape to water.
15 So we know that Manitoba Crop Insurance does have
16 records of people who repeatedly claim for
17 flooding year after year. I know in my area where
18 I live, because it is so wet, they do this. And
19 so these records can be used to identify these
20 operators and maybe give them assistance with
21 other options that they could pursue so that they
22 don't have this, where they put on the fertilizer
23 each year, and then it is gone because it was
24 flooded out, because the area was inappropriate
25 for that kind of activity in the first place.

1 Manure spreading on the same plot of
2 land year after year should not be allowed,
3 because eventually you have the build-up of the
4 solids and metals and so that can permanently in
5 some cases incapacitate the future production
6 potential of that land. Surface water should be
7 periodically monitored downstream, and this should
8 be mandatory in order to promptly identify if
9 there is going to be a problem, you can address it
10 early on rather than years down the line when a
11 lot of damage has already been done. This part,
12 this relates to the current --

13 THE CHAIRMAN: Dr. Pip, about how much
14 longer do you think you have in your presentation?

15 MS. PIP: Actually, the next, I'm
16 informed that Mr. Hugh Arklie is not here.

17 THE CHAIRMAN: He will be here later.

18 MS. PIP: Would you like me to stop at
19 this point?

20 THE CHAIRMAN: No. How much longer do
21 you think it could be?

22 MS. PIP: Could I have another 15
23 minutes?

24 THE CHAIRMAN: Okay. And I say that
25 because this is probably the first scientifically

1 based presentation we have had in opposition, so
2 we will give you a little grace because of that.

3 MS. PIP: Thank you. So then I won't
4 go into this in detail in terms of the suggestions
5 that I have, in terms of how the nutrient
6 calculations can be improved that we have. I will
7 just move on here.

8 Manure application, this relates to
9 applying, the problems, particular problems when
10 we have applied to pasture land and also certain
11 kinds of crops that tend to be nitrate
12 accumulators and, therefore, can lead to toxic
13 concentrations of things like cyanogenic
14 lycosides, and also in cattle, excess nitrate
15 levels that may cause nitrate toxicosis.

16 These are just some slides showing
17 these heaps of -- this is in this case hog manure.
18 There is the shoreline of Lake Winnipeg, and these
19 heaps, every year the operator simply adds to them
20 but does nothing at all in the way of spreading
21 them.

22 Winter manure application; this is
23 important because we still have quite a bit of
24 this going on in our province, especially the
25 smaller operators. My neighbour, for example, my

1 next door neighbour, every day of the year,
2 because he doesn't have a lagoon. So no winter
3 application should be allowed, period, because you
4 may have a number of these smaller operations in
5 an area and they can add up numerically in terms
6 of their impact, they can add up to more than the
7 impact say of a single larger operation might
8 have.

9 The pathogens in swine waste -- I will
10 move on here. So manure application in winter
11 months, there is other research from other areas
12 which showed now that besides the nutrient
13 problem, the coliform problem, especially when
14 applied on snow -- and so this is another reason
15 why this should not be allowed.

16 This business of antibiotic resistant
17 bacteria, again, this is other research that I
18 will just go by here.

19 We have to plan for swine disease
20 outbreak, because we know for a fact that sooner
21 or later this is going to occur in our province,
22 and so we have to be prepared for how we dispose
23 of diseased animals -- or even large numbers of
24 animals, like, for example, you have a barn fire
25 or something like that, at present we don't have

1 any real -- well, we have to think about this.

2 Okay.

3 These were studies done in Ontario
4 with respect to livestock operations and well
5 water contamination, so basically they found
6 increased well water contamination, and
7 particularly e. coli. So I will go past that.

8 Algae, as we know in Manitoba, big
9 problem, nitrogen and phosphorous feeds the algal
10 blooms, and this is a public health issue because
11 there is no antidote. This is one of the most
12 toxic -- these are among the most toxic compounds
13 that there are. So, again, we have the prospect
14 of climate change, this is something that we have
15 to consider again in our longer range plans, and
16 the ecological effects and so on.

17 So the deficiencies in current
18 practices, I will just go past this too, and the
19 need for restrictions. These are all just based
20 on -- I have now been looking at this for more
21 than 40 years, sampling water in Manitoba. So all
22 of these ideas that I have here, they are a
23 synthesis of what I have seen having traveled now
24 through all areas of the province, and then where
25 we should exercise special restrictions, and then

1 other issues such as, for example, greenhouse
2 gases and so on.

3 Then what I would like to do is show
4 you some 35 millimetre slides. And the reason I'm
5 showing you slides rather than having scanned it
6 into a digital image, this is so that -- the same
7 as with forensics and crime scenes, for example,
8 you still have to use film, you are not allowed to
9 use -- so these are the actual negatives that you
10 are viewing. They have not been altered in any
11 way.

12 So we have in many areas of the
13 province some of these very, very large barns, and
14 we don't even know how many hogs are housed in
15 these operations because, of course, there is no,
16 nobody checks, and inspectors are not allowed to
17 go inside for issues of biosecurity and so on.
18 And we do know that a lot of hogs get sold not
19 just through regular channels, but under other
20 people's names and so on. So, in fact, we have
21 hogs that we don't account for in the numbers that
22 we give when we say how many hogs there are in the
23 province.

24 Now, as I mentioned, these operations
25 tend to be located near streams, which are the

1 worst possible place that they should be located.
2 The other thing is that they are located in areas
3 where there is a lot of good quality water because
4 of the high water requirements of these
5 operations, but unfortunately the water that they
6 put back is quite different from the water that
7 they take. And in many cases the technical review
8 committee -- that is another whole issue that I
9 had wanted to address but don't have time for --
10 the technical review committee routinely has
11 approved projects where there was zero information
12 in terms of hydrological data, aquifer size, what
13 other demands were being made on these aquifers,
14 and yet these projects still got approved.

15 Here is another one, when I had
16 mentioned no direct drainage to surface water
17 bodies, here we see -- this is a relatively
18 smaller operation, but what this person has done,
19 he dug a ditch straight from his barn door here,
20 and it goes to the road side ditch which then goes
21 to the nearest local stream. And so in terms of
22 the impact on the surface water, we have -- we can
23 clearly see that there are often large pieces of
24 waste that end up in the local water. This one in
25 particular, this happens to be Hazel Creek which

1 is not far from here. Hazel Creek is a
2 particularly sad example because it contained
3 many, many rare species originally that were not
4 found elsewhere in Manitoba, but now we have
5 allowed it to degrade to the point where not very
6 much lives in there at all now.

7 Here is another example of just hog
8 barn waste dumped into a neighboring stream. And
9 then this is in the Interlake area, this is a
10 ditch where hog waste is dumped, and this ditch
11 goes directly to a wildlife refuge. So here is
12 another example, this is a stream, again, just
13 downstream from a hog barn, absolutely nothing
14 lives in that water except for anaerobic bacteria.
15 There is nothing else there, and the stench is
16 horrible.

17 And here this is in the Fisher Branch
18 area. So we have the hog manure right here beside
19 the ditch, and again the flies and stench here, we
20 see all of the algal blooms. And the problem with
21 above ground storage tanks, that is a whole other
22 issue that we have to look at more closely. This
23 again, there is the shore of, the west shore of
24 Lake Winnipeg, and we have the manure just dumped
25 there and the ditch going by.

1 Okay. Here in this case, this is my
2 next door neighbour, and the reason that I put
3 this here is we see an abandoned well head here,
4 and he generates so much manure that he piles it
5 up around the abandoned well head. And as a
6 result, therefore, I have had to boil my water now
7 for years. It wasn't like that when I first came
8 there.

9 And here we see, this is in the Rivers
10 area in Southern Manitoba, here we see a manure
11 tanker, and what he is doing is he is going along
12 the roadway and he is dumping the manure in the
13 ditch. Toughest regulations in the world, right?

14 So, again, this is where I live.
15 Okay. The winter manure spreading, and there is
16 so much of this that by March -- my house is in
17 these trees here -- this is what it looks like by
18 March, it is up to about a foot thick or so on
19 there. And then this time of year now, okay,
20 there is another shot of that field next to me.
21 And so when this melts, this is the same field
22 that we saw in the previous two slides, all of
23 this simply rushes off into the ditch and into the
24 Brokenhead River. Right, toughest regulations in
25 the world.

1 And I just wanted here to show you
2 some slides of the other problems that this
3 ultimately causes down the line. And that is the
4 algae, of course. This is what blooms look like,
5 and they produce a variety of toxins that there is
6 no antidote. Some of them are extremely fast
7 acting. In fact, if you were to take a coffee mug
8 and dip it into here and drink it, you would be
9 dead in less than five minutes. And we have many,
10 many livestock, many livestock deaths, hundreds of
11 livestock deaths each year because of the algae in
12 dugouts and ditches.

13 Here, this is a ditch just downstream
14 from a hog barn. And what we see here, algal
15 blooms at the end of October. Now, we know that
16 blue greens normally don't bloom unless the
17 temperatures are fairly warm, like more than
18 15 degrees, but here in this case, temperatures
19 are near freezing, but there is so much nitrogen
20 and phosphorous in this water that we see algal
21 blooms even at this unseasonable time of year.

22 Now here, okay, where does this end
23 up? Lake Winnipeg now, I will just go through
24 this quickly here because a lot of you know about
25 Lake Winnipeg. In some cases these algal blooms

1 are so extreme, here this is on the west side of
2 Lake Winnipeg, so in this case now the eco-system,
3 when you have something like that has collapsed
4 completely, there is absolutely no oxygen in the
5 water column below that. Again, here we see how
6 dense these blooms are, okay. And another -- and
7 so what happens then is we then inflict another
8 problem to try to deal with the algal blooms. We
9 treat the water with copper sulfate, even though
10 that is supposed to be illegal, but we still do it
11 anyway. So the copper sulfate kills off any of
12 the aquatic organisms which the original algal
13 hasn't managed to kill off. Here we see here, all
14 the copper sulfate here, that is at Victoria Beach
15 right next to their water intake, so the people
16 are drinking that water there.

17 So, I guess I have to quit here now,
18 even though I would have wanted to say so, so, so
19 much more.

20 THE CHAIRMAN: Thank you very much,
21 Dr. Pip. We may have one or two questions for
22 you. Edwin?

23 MR. YEE: Yes, Dr. Pip, just a
24 question. In your categories you had the minimum
25 impact land use category. Can you give me an idea

1 of the types of land use? Would that be like
2 Crown land?

3 MS. PIP: Yes, some of them would have
4 been Crown land. The minimal land use was simply
5 sites where we could see no obvious human
6 activity. So they would have been things like
7 back country areas, or areas in Provincial Parks
8 that were away from the developed areas, and many
9 bogs, like even around here, like the Julius bog
10 and the Whitemouth bog and so on, where that kind
11 of land, it is the least suitable anyway for other
12 human activities. So, yes, therefore that kind of
13 land tended to have a lot of dissolved organic
14 matter in it simply by virtue of the bogs. But
15 other than that, you could have demonstrated, like
16 for the other parameters, that all of our human
17 activities have identifiable impacts. And here is
18 one of the other things that I wanted to say is,
19 we can't just look at the livestock industry or
20 the hog industry as though it was hanging by
21 itself in space, because it isn't, it ties in with
22 all the other activities that are present in that
23 area, and that also have impacts on that same
24 water. And so we have to consider everything in a
25 comprehensive way, instead of looking at each

1 individual application as though that were the
2 first application we ever had.

3 MR. YEE: Thank you.

4 THE CHAIRMAN: You noted earlier in
5 your presentation that about 53 per cent of
6 livestock sites are on clay land.

7 MS. PIP: Yes.

8 THE CHAIRMAN: And about 26 on sand
9 and gravel. And then if I understood you, and I'm
10 not a scientist, but then you seemed to indicate
11 that where sites were on clay land, because of the
12 clay there was more run-off into surface water.

13 Is that --

14 MS. PIP: No. What that indicated is
15 where you had adjacent surface water, it was also
16 on clay sediment, it seemed that clay sediment,
17 the clay particles are very fine, like they have
18 colloidal particles and so on, they have very
19 large surface area and a lot of them have ion
20 exchange capacity, so a lot of these particles
21 tend to bind nutrients that come off wherever they
22 come from, the run-off or whatever. And,
23 therefore, if this water stands in contact with
24 the clay sediments that contain the bound
25 nutrients, that you have an increased amount of

1 nutrients transferring across the clay water
2 interface into the water in these areas simply
3 because the sediment already contains more of the
4 bound nutrients, therefore, the likelihood is
5 greater that the nutrients will transfer to
6 overlying water.

7 THE CHAIRMAN: So is it okay,
8 considering all of the other regulations in place,
9 is it okay to site livestock operations over clay
10 based soil?

11 MS. PIP: Yes. Yes, that is the best
12 option because of the least permeability of that
13 type of soil. So here we are talking about
14 groundwater potential for contamination. What I
15 was looking at was overland run-off, which then is
16 a completely different story. So that comes back
17 again to one of my suggestions, that we have to
18 make sure that the site is contained, so that
19 there is no opportunity for overland escape of
20 materials into the adjacent surface water.

21 THE CHAIRMAN: And it is your view
22 that there should be no livestock operations on
23 sand and gravel based --

24 MS. PIP: That is my view, yes.

25 THE CHAIRMAN: Thank you. Wayne.

1 MR. MOTHERAL: Thank you. Ms. Pip, I,
2 being a former councillor, a former municipal
3 official, I was curious, you say that the
4 technical review committee approved a certain
5 project. Well, if I'm on the understanding, I
6 believe municipal councils have the final say as
7 to where -- I don't want to, I'm not leading into
8 anything here, but municipalities do have the
9 final say, I believe, as to where hog operations
10 would be.

11 MS. PIP: Okay. To answer your last
12 comment first, theoretically, yes, they do, but
13 when you actually speak to the municipal councils,
14 they are under the impression that with the new
15 planning act now, that once a project has been
16 okayed by the technical review committee, that
17 they are, if they then vote against this, if it
18 has been okayed by the technical review committee,
19 that they are then setting themselves up as liable
20 for legal action by the proponent under this new
21 planning act.

22 The other thing is that in my
23 experience, I find that the technical review
24 committee should have better qualifications to
25 review, because I will cite as one example, well,

1 the most recent example was the night right before
2 the municipal election last fall, there was, in
3 Lac du Bonnet, there was a municipal council
4 meeting to approve a proposal. And that proposal,
5 first of all, it was on only about a 42-acre
6 property to have these livestock barns. Secondly,
7 he didn't have enough manure storage space there.
8 Thirdly, he was proposing to apply manure. Four
9 of his spread fields had municipal drains running
10 across them, and he had indicated no plans to
11 observe setbacks, not only from property lines,
12 roadways. And the drains, he was indicating it
13 was 160-acre field with a big municipal drain
14 running across it. He had four of them like that.
15 He indicated that he would be spreading the whole
16 160 acres. That still got approved. He indicated
17 two of his parcels would be bog land, completely
18 100 per cent organic soil. And the technical
19 review committee didn't blink with that. He was
20 missing soil samples for some of those proposed
21 spread fields. The technical review committee
22 didn't blink with that. Well, that was just one
23 single application. So what I'm saying is, the
24 technical review committee process means nothing.

25 MR. MOTHERAL: That is all I have.

1 THE CHAIRMAN: Thank you very much for
2 taking the time to come out here today, Dr. Pip.
3 Excuse me a moment.

4 Next is Mr. Hugh Arklie.

5 MR. ARKLIE: Sorry, I just got here,
6 so I think the process is to identify myself and
7 then carry on. Is that correct? Did anybody want
8 to swear me in first?

9 THE CHAIRMAN: Would you please state
10 your name for the record?

11 MR. ARKLIE: My name is Hugh Arklie
12 and I'm in the postal district of Dugald.

13 HUGH ARKLIE, having been sworn, presents as
14 follows:

15 MR. ARKLIE: So, my presentation today
16 is entitled "Factory Hog Industry Review Land Use
17 Planning And Approval." As a result of the
18 scoping process, the Commission sought input into
19 those subjects that should be discussed at the
20 eventual meetings, and a list of opportunities was
21 presented from which we could choose, and I chose
22 land use, planning and approval.

23 Introduction: K. William Kapp in 1971
24 defined social costs as direct and indirect costs
25 suffered by third parties resulting from private

1 economic activities. Social costs include damage
2 to health, property values and natural landscapes.
3 The impacts of the industrialization of swine
4 production on the environment, health and makeup
5 of Manitoba's rural community fit Kapp's
6 definition of social costs.

7 Manitoba's legislators were not
8 insensitive to the concept of social costs when
9 they wrote the Environment Act. In fact, its very
10 first section describes the intent of the Act to

11 "...ensure that the environment is
12 maintained in such a manner as to
13 sustain a high quality of life,
14 including social and economic
15 development."

16 So the factory pig industry will be judged not
17 only by its economic performance, but also on its
18 social performance. This paper will show it
19 failed miserably.

20 Furthermore, the Sustainable
21 Development Act speaks clearly to the issues of
22 health. It holistically defines health as being

23 "Sound in body, mind and spirit."

24 The Canadian Public Health Association in 2000,
25 the Canadian Medical Association in 2002, and the

1 American Public Health Association in 2004 have
2 all adopted resolutions expressing concerns about
3 health issues and industrialized hog operations.
4 This paper will show why the mental health of
5 Manitobans is at risk.

6 There are many routes that this
7 discussion could take, but a focus on land use
8 planning and approval will best highlight how the
9 porcine industry and its confederates in the civil
10 service have taken square aim at the social
11 development and mental health of rural Manitobans.

12 The abuse of rural Manitoba by sunless
13 hog factories has its genesis in the Lisoway v
14 Springfield Hog Ranch Ltd. case. It was this
15 court defeat of the hog industry in 1974 that
16 caused the NDP government in 1976 to strip rural
17 Manitobans of the ancient English common law right
18 to sue for nuisance. For 31 years the industry
19 has been favored by the courts, forcing its
20 opponents to marshal widespread opposition during
21 the land use and planning approval process.
22 Typically, petitions are produced that clearly
23 show massive public opposition. They are
24 dismissed because apparently democracy ends at the
25 ballot box and we are not allowed to participate

1 in the intervening four years. There is no
2 shortage of examples, including my municipality,
3 Springfield.

4 When large numbers of citizens
5 assemble with the protection of their communities
6 in mind, the civil service from urban Manitoba
7 descends to convince them of their errors. In
8 2001, representatives of the government told the
9 people of Shellmouth-Bolton that they had no legal
10 right to oppose a new hog factory. That is, they
11 had no right to protect their current way of life,
12 social costs be damned, the Environment Act be
13 damned. But the hog industry can participate.

14 In 2000, an operator tried to win the
15 approval for a new factory by offering \$100,000 to
16 support the region's bid for the Manitoba Winter
17 Games. All that the municipality had to do was
18 stop blocking the company's expansion plans. To
19 its everlasting credit, Bifrost said get lost.

20 The sorry history of the intensive hog
21 industry in Manitoba is replete with examples of
22 conflict of interest. Individuals are allowed to
23 sit on technical review committees, while
24 relatives apply for factory approvals. Municipal
25 staff offers advice to relatives on how to avoid

1 the spirit of the rules. Councillors do not
2 absent themselves from debate concerning
3 individuals with whom they have business dealings.
4 Councillors compromise their integrity by
5 approaching applicants during public hearings.
6 But the best or worst examples include senior
7 public servants who made the rules and guidelines
8 for the hog industry. I remember them well. They
9 would utterly ignore the public upon showing up at
10 council meetings where they would, with clinical
11 precision, support a new factory proposal. They
12 were and are hog industry servants, not public
13 servants. Too bad that the pigs cannot pay their
14 salaries and pensions. Some senior public
15 servants have graduated beyond supporting the
16 industry while being paid by the public. Now they
17 are in the employ of the industry and get to
18 benefit from the work of their earlier careers
19 when they made the regulations and guidelines
20 under which they now operate. They also get to
21 interact on an informed basis with the current
22 crop of public servants, an advantage that no
23 rural citizens enjoy.

24 Speaking of the public service, it
25 enjoys a virtual monopoly over membership on

1 technical review committees. They set the rules
2 in their offices, then they analyze the
3 proponent's application. The analytical work, the
4 so-called analytical work is usually done in the
5 cozy confines of those same offices. It is then
6 forwarded to the rural municipalities who in their
7 wisdom confer environmental assessment status on
8 this junk.

9 In the RM of Strathclair and in the
10 RM of Turtle Mountain, TRCs missed the presence of
11 water bodies that were crucial to the assessment
12 of hog factories. In a classic example of
13 carelessness, a TRC failed to pick up glaring
14 errors in a proposal that went before the RM of
15 Portage la Prairie. In these examples it was
16 citizens who took the trouble to analyze the work
17 of the TRCs. How many more bungled TRC reports
18 have been relied upon by municipalities in the
19 absence of citizens who volunteer their time and
20 costs to check on the work of the TRCs?

21 None of this is surprising. It is
22 disgusting, but it is not surprising, since the
23 public service is squarely in the corner of the
24 porcine industry. The so-called work of the TRCs
25 is illegitimate and unprofessional. There is no

1 requirement of a TRC to visit the field, to
2 consult with experts, or to gather local
3 knowledge. The result of the TRC process is to
4 diminish the spirit and intent of the Environment
5 Act and the Sustainable Development Act. The
6 environment is given short shrift, and the social
7 costs mount.

8 Land use planning and approval is
9 irrelevant in Manitoba because that is the way the
10 industry and the public service wish it to be.
11 The proof is in the pursuit of offenders. In the
12 RM of Hillsburg a lagoon was built in flagrant
13 disregard to the regulations. A video taken by a
14 neighbour proved that it could not handle a
15 subsequent rainfall. It was porous and all the
16 rain, every cupful, leaked right through.

17 Four million litres of pig manure
18 spilled near Morden in 2000. The public was told
19 three years later. Hog slurry is about 100 times
20 more toxic than raw human sewage. In 2002, a
21 steel manure storage tank near MacGregor exploded
22 its way into infamy. It dumped four million
23 litres of hog slurry in a heartbeat, contaminating
24 local wells. Near Cypress River in 2005, a lagoon
25 failed, poisoning the surrounding area with more

1 millions of litres of the hog industry's curse
2 upon us. These tragic events were understated by
3 the Department of Conservation. No meaningful
4 penalty was assessed by the department, much less
5 paid by the operators, who did not even seem to be
6 embarrassed.

7 Government oversight is ineffectual.
8 Bill 33, the new Planning Act, appears to have
9 been written to make straight the path of the hog
10 industry. The Farm Practices Protection Act,
11 which replaced the infamous Nuisance Act of 1976,
12 makes provision for a Farm Practices Protection
13 Board. Unfortunately, the board is regularly
14 scorned by operators who apparently need multiple
15 notifications and warnings before they acknowledge
16 their social responsibilities as embodied in the
17 Environment Act and the Sustainable Development
18 Act. What is the point of a speed limit if there
19 are no traffic cops? Indeed, if there is no
20 traffic enforcement at all, why issue driver's
21 licences? The hog equivalent of a driver's
22 license is land use planning and approval. In
23 fact such planning and approval is about as
24 meaningful as a driver's licence in Baghdad.

25 The industrial porcine business has

1 run rough shod over this province. It has stained
2 the rural countryside with its presence by
3 introducing foul odours, heavy metals, noxious
4 gases and residual antibiotics, all while it
5 abuses dumb animals in factory enclosures. The
6 industry has caused social costs that it can never
7 hope to repay, even if it felt the obligation to
8 do so.

9 The CEC should bring down the hammer
10 on this industry and recommend a permanent closure
11 on its expansion. In doing so it will invoke the
12 precautionary principle which ensures that future
13 harm will not be done by taking precautionary
14 actions to prevent a threat to human and
15 environmental health. This can only be done if
16 you believe that nine million pigs are enough.

17 That, Mr. Chairman, is the end of my
18 presentation. I do have a note here that says the
19 material that you have following my presentation
20 in your binder is a series of scientific studies
21 on the hog industry. Some of them are taken from
22 Manitoba research, some are from the U.S., one is
23 from France. The one from France is interesting.
24 It shows that pig manure can now be fingerprinted
25 so they can tell pig manure from other animal

1 manure. I know that the hog industry will object
2 to the use of non-Manitoba studies, but the last
3 time I looked, H2O was water everywhere.

4 Thank you very much.

5 THE CHAIRMAN: Thank you, Mr. Arklie.
6 Edwin?

7 MR. YEE: I'm not sure if I have a
8 question for you, Mr. Arklie. I guess just for
9 clarification, though, I realize what you are
10 asking us to look at and your position is,
11 continue the moratorium. But I'm thinking in
12 terms of on the positive side, would you have
13 suggestions, given your statements about the
14 technical review committee, how that process could
15 be improved, if it were to continue?

16 MR. ARKLIE: I think the standard
17 should be ratcheted up a significant amount.
18 There is a general misconception on the landscape
19 that a technical review, and if you read some of
20 the rural papers that have reported on your
21 meetings, you will find that rural participants
22 that have I have read in some of the rural papers
23 are equating a technical review with an
24 environmental assessment. It simply isn't the
25 case. There is no requirement for the TRC members

1 to actually get their feet dirty by walking on to
2 a field and have a look at what is going on. They
3 can do whatever they want from the corner of
4 Portage and Main. It is not an environmental
5 assessment, but the public thinks it is an
6 environmental assessment. So if you want to earn
7 that type of respect from the public, then you
8 better perform the work and actually do
9 environmental assessments as contemplated by the
10 Environment Act.

11 Technical review is just, it is
12 nonsense. There is no substance to any technical
13 review that I have ever seen. It is a matter of
14 checking off boxes, and apparently putting into
15 that as much care and concern as the average
16 consumer doing a corporate survey puts out.

17 The real tragedy, though, is that
18 people are being allowed to give the public the
19 misconception that these are environmental
20 assessments, and once the approval goes through,
21 then everyone assumes that the environment has
22 been protected because of the documentation that
23 has been tabled. It is fraudulent. The process
24 is useless. I think Dr. Pip said the same thing.

25 THE CHAIRMAN: What do you base that

1 on, that it is fraudulent, that they don't have
2 very high standards to meet?

3 MR. ARKLIE: Because I think the
4 industry is quite happy to have the public
5 confused over what is an environmental assessment
6 and what is not. I think the hog industry in
7 Manitoba knows full well that a TRC -- because
8 they are smart people. Some of them have had the
9 opportunity of actually working on environmental
10 assessments, and they know, as well as you and I,
11 that these are not environmental assessments in
12 the sense of the Environment Act, which is the
13 impression they are giving to the public and the
14 public embraces it. To avoid that, we have to
15 tell the public either these aren't environment
16 assessments so don't get your hopes up, or
17 actually do environmental assessments.

18 THE CHAIRMAN: Thank you.

19 MR. MOTHERAL: I'm not sure whether --
20 you had this quotation here, Mr. Arklie -- whether
21 you were trying to bring forth a point, or do you
22 know from research, is hog slurry 100 times more
23 toxic than human slurry?

24 MR. ARKLIE: Pardon me?

25 MR. MOTHERAL: I am just wondering if

1 you were just using that to put a point out or did
2 you have any research at all?

3 MR. ARKLIE: I think you will find
4 that referred to in at least one of the studies I
5 have in there. It might be Bill Payton's study.
6 It might be another one.

7 THE CHAIRMAN: Thank you very much,
8 Mr. Arklie. Thank you for all of the reading
9 material.

10 David Young. State your name for the
11 record, please?

12 MR. YOUNG: My name is David Young.
13 DAVID YOUNG, having been sworn, presented as
14 follows:

15 THE CHAIRMAN: Proceed please, sir.

16 MR. YOUNG: Mr. Chairman,
17 distinguished members of the Commission, the Clean
18 Environment Commission, my name is David Young and
19 I appear to present to you a report on water
20 quality in the Whitemouth River watershed on
21 behalf of the Whitemouth-Reynolds Soil and Water
22 Conservation Association. The Whitemouth-Reynolds
23 Soil and Water Conservation Association is an
24 unincorporated syndicate of persons interested in
25 soil and water conservation in the municipalities

1 of Reynolds and Whitemouth. The association
2 includes members of the councils of both
3 municipalities and is supported by the
4 municipalities. The association is supported by
5 Manitoba Agriculture, Food and Rural Initiatives,
6 and has also received support and advice from
7 other agencies of the Government of Manitoba and
8 from PFRA. Financial support is provided by the
9 municipalities and, from time to time, by several
10 agencies of the Government of Manitoba. I would
11 mention peripherally, sir, that the budget of this
12 association is approximately \$7,000 per year. It
13 is a small amount, but it comes from many sources.

14 We are presenting to you today a
15 report which summarizes the results of six years
16 of methodical testing of water quality in the
17 Whitemouth River. The report shows that nutrient
18 levels in water discharged from this watershed are
19 within Provincial water quality guidelines. It
20 also shows that the levels of concentration of
21 phosphorous and nitrogen in the Whitemouth River
22 do not increase as the river flows through the
23 agricultural and residential areas of the
24 watershed, and the levels of concentration have
25 not increased during the last six years.

1 In brief, the report shows that
2 agriculture and other human activities in this
3 watershed are not contributing to increased levels
4 of nutrients in Lake Winnipeg or other downstream
5 waters.

6 Sir, if I may digress just for a
7 moment at this point, I must apologize, I had
8 completely missed the highlighted point in the
9 letter received from your Commission asking that I
10 submit ten copies of our report to you. I
11 submitted one, plus an electronic copy, and of
12 course I realize, gentlemen, that you do not have
13 our report before you. It is 18 pages long,
14 consisting mainly of data, and it has appended to
15 it some 15 pages of all of the water test results
16 from the previous six years. I'm sorry that you
17 have not got that in front of you. Perhaps when I
18 finish you may wish to raise some questions that I
19 have not included in my address because of my
20 misunderstanding. The fault was entirely mine.

21 The report which we are submitting to
22 you today includes and summarizes the results of
23 301 sets of water quality tests. As we are
24 presenting you with a complete record of these
25 tests, I shall, with your approval, sir, confine

1 myself to a brief summary of some of the salient
2 results and concentrate my presentation on the
3 rationale for the collection of this information
4 and on the mythology -- on the methodology, that
5 was a very unfortunately mistake, sir -- on the
6 methodology of the testing process.

7 Most of the population of the
8 municipalities of Reynolds and Whitemouth live in
9 the Whitemouth River watershed, and almost all of
10 the farmyards are located in this watershed, often
11 near the rivers. A small area of land and a few
12 farms are in the Brokenhead watershed that is over
13 towards the Molson area, and another small area
14 drains directly into the Winnipeg River, that is
15 in the Rennie area and just in the east side of
16 the Rural Municipality of Whitemouth.

17 We use river water for recreation, for
18 stock watering, and sometimes, after treatment,
19 for household uses. Water quality is vitally
20 important to all of us. We recognize and
21 understand the widespread concern for the extent
22 to which Lake Winnipeg is being contaminated by
23 excessive nutrients, nitrogen and phosphorous, and
24 recognize that agriculture is sometimes blamed for
25 contributing to this problem by allowing excess

1 run-off from fertilized fields or for
2 contamination of rivers with manure.

3 To discover and report the extent to
4 which we might be affected by contamination of
5 water in our rivers, and to learn to what extent
6 we might be contributing to contamination of
7 downstream lakes or rivers, the
8 Whitemouth-Reynolds Soil and Water Conservation
9 Association decided in 2001 to begin monitoring
10 water quality in our rivers. We have received
11 financial and technical assistance in this
12 undertaking from both municipalities, from
13 Manitoba Agriculture, Food and Rural Initiatives,
14 and from the Sustainable Development Fund, from
15 PFRA and from Manitoba Water Stewardship. All
16 laboratory tests have been conducted by Enviro
17 Test Laboratories. Test protocols were
18 established in consultation with and under the
19 advice of officers of the Manitoba Water
20 Management Agency, now known as the Department of
21 Water Stewardship. Eleven parameters are measured
22 from each set of samples. We concentrate on total
23 phosphorous, total caldol nitrogen, faecal
24 coliform and e. coli. We are advised that these
25 protocols are in harmony with those used by the

1 province.

2 During the first year, 2001, sample

3 sets were collected at four sites on the

4 Whitemouth River. In the second year a collection

5 site was established on a tributary known as

6 Kelner Creek, and a third year an additional site

7 was established on the Whitemouth. Since that

8 time samples have been collected at five sites on

9 the Whitemouth and one on Kelner Creek. I would

10 mention peripherally, sir, that in the way we have

11 presented the data in the report which we are

12 submitting to you, the Kelner Creek appears in the

13 tabulated forms and in the graphics in the same

14 sets of tables and graphs as the tests on the

15 Whitemouth River, but those tests are for Kelner

16 Creek upstream its confluence with the Whitemouth

17 and do not reflect water quality in the Whitemouth

18 River at that point. This is significant because

19 water, the phosphorous and nitrogen levels, for

20 example, in the Kelner Creek watershed, which is a

21 small intermittent stream, tend to be about 50 per

22 cent higher than the concentration levels in the

23 Whitemouth at that point. We are measuring it

24 separately because we are concerned about this

25 particular one.

1 Site one, our first site, is located a
2 few kilometres upstream, that is south of highway
3 1, south and east of Hadashville. The point was
4 established to measure the quality of water
5 draining from the lake, forests and bogs upstream
6 of virtually all residents and farms. Site two is
7 located several kilometres downstream on
8 provincial trunk highway 506 to measure any
9 changes which might occur as a result of drainage
10 of the Hadashville, Medika areas. Site three is
11 located on highway 44, a few kilometres east of
12 Whitemouth, where we are just at the moment. The
13 boggy Birch River, which drains more than one
14 quarter of the watershed, joins the river in this
15 reach. And the boggy Birch drains more than one
16 quarter of the watershed, joins in this reach.

17 And site three was established to
18 measure any changes which might be attributable to
19 that source, or to the fairly extensive
20 agricultural area surrounding Elma. Any changes
21 in quality attributable to intermittent flow from
22 the Kelner Creek would also be reflected in
23 differences between sites two and three.

24 Site four is located downstream of
25 Whitemouth in order to measure any changes

1 attributable to this community.

2 The final site, site five is located
3 close to the confluence of the Whitemouth and the
4 Winnipeg River and measures the quality of water
5 discharged from the watershed.

6 In 2001 we collected 13 sets of
7 samples at each of the four locations for a total
8 of 52 sets. Eleven sets were collected between
9 mid April and late October, and the other two were
10 collected in the winter. In 2002, 13 sets were
11 collected at the same points on the river, and six
12 sets were collected at Kelner Creek for a total of
13 58 sets. In 2003, an additional collection point
14 was established and the frequency of sampling was
15 reduced. A total of 60 sets were collected; 54
16 sets were collected in 2004. The frequency of
17 collection was reduced again in 2005, and 39 sets
18 of samples were collected. And in 2006, 38 sets
19 were collected. In total, 301 sets were collected
20 during the six year period. Results of all of
21 these tests are appended to the report which we
22 are submitting to you today.

23 Our analysis of the data derived from
24 laboratory tests of the 301 sets of samples has
25 focused on three parameters, the concentration of

1 total phosphorous, total caldol nitrogen and e.
2 coli. During the six year period the geometric
3 level of total phosphorous measured at site one
4 was .0408 parts per million. This measurement
5 point is upstream of the agricultural area in the
6 watershed and upstream of almost all permanent
7 residences. It reflects the quality of water
8 draining from Whitemouth Lake and a region of
9 forest and bog located south of highway 1. The
10 highest mean level at this point was recorded in
11 2001, on one of the occasions when we tested, and
12 it was .049 parts per million. The lowest annual
13 mean was .0286 in 2005. I mention in this
14 context, and of course you will realize that the
15 provincial guideline is .05 parts per million or
16 below. Now, this is at our upstream point, the
17 point where the river is flowing from the forests
18 and the bogs.

19 The six year mean level of phosphorous
20 measured at Seven Sisters, this is at the point
21 where the river is discharging into the Winnipeg
22 River, was .0394, or slightly lower than the
23 levels measured at the highest upstream point.
24 That is .0394 as compared to .0408. I know these
25 are tedious, they are four decimals, four point

1 decimals, and we have had to go to four point
2 decimals in order to show the variation from point
3 to point and from year to year. It is that small,
4 sir, and we are not exaggerating. This is for our
5 own use.

6 A review of the detailed report will
7 reveal that this contrast represents a consistent
8 pattern through the six year period. The levels
9 at both points fluctuated over a narrow range
10 throughout the period, and the level of
11 concentration of phosphorous was consistently
12 lower at Seven Sisters than at the upstream point,
13 where there is no opportunity for the level to be
14 influenced by agricultural activity.

15 Levels at intermediate points varied
16 slightly from those at the upstream and downstream
17 measuring stations. The highest six year mean
18 level was at a point downstream of Hadashville.
19 At this location, a mean level of .0440 was
20 recorded. Again, sir, .0440 as compared to .0408,
21 we are getting down to pretty fine variations
22 here.

23 We note that North/South Consultants,
24 in a report to the Lake Winnipeg consortium,
25 reports a mean level of phosphorous in the south

1 basin of Lake Winnipeg in 2005 at slightly more
2 than .16 parts per million, some four times the
3 level of concentration in water discharged from
4 the Whitemouth River. The concentration of
5 nitrogen in the waters of the Whitemouth River, as
6 measured at site one, the upstream site,
7 fluctuated around one part per million during the
8 six year period. The six year mean level was
9 .9229 parts per million. That is below one part
10 per million at this point. The comparable level
11 of nitrogen at Seven Sisters was .8698, or
12 slightly lower than at the upstream point. A
13 review of the documents, which we are submitting
14 today, will show that this pattern is consistent
15 over the six year period and throughout the
16 watershed. Levels of concentration vary within a
17 fairly narrow range from point to point and from
18 time to time, but remain at levels which we
19 consider satisfactory.

20 Departing for just one moment before I
21 read the last paragraph, departing for just one
22 moment from my written presentation here, sir, I
23 would note that the report that we are providing
24 to you focuses particularly on the years
25 2005/2006. It is a report prepared for local use

1 within the community, of course.

2 2005, as noted in an earlier
3 presentation, was a year of high rainfall. We do
4 not have a hydrological monitoring station which
5 allows us to compare river flows from year to year
6 or from one reach of the river to another.

7 However, from casual observation from all of us in
8 the association, we know that '05 was a year of
9 high water flows. By the same method of
10 observation, 2006 was a very dry year, and we had,
11 well, the lowest levels of water in the rivers
12 that I had seen in 30 years of living on the river
13 bank.

14 Now, 2005, the mean levels of
15 phosphorous and of nitrogen were lower than the
16 six year mean. 2006, the dry year, the mean
17 levels were higher for both phosphorous and
18 nitrogen than the six-year mean, contradictory of
19 information which has been presented to you here
20 today, and we make -- we are not here as
21 advocates, we are simply here to present factual
22 information for your consideration and use. But
23 in fact -- and this you will see from the
24 documents that we have submitted -- in fact, in
25 periods of high water flow, high precipitation,

1 and believe me we have had some really high years
2 in those six years, the levels of concentration
3 are somewhat below, of both phosphorous and
4 nitrogen, are somewhat below the levels in the
5 drier years. We offer no explanation for that,
6 sir, just this is a fact.

7 The Whitemouth-Reynolds Soil and Water
8 Conservation Association wishes to express to you,
9 Mr. Chairman, and to members of your Commission,
10 our gratitude for this opportunity to present this
11 information to you. We are submitting for your
12 consideration our water quality report for 2001 to
13 2006 period, and we are appending reports of
14 analysis of the 301 sets of samples collected
15 during the six year period. Perhaps you have some
16 questions, sir.

17 THE CHAIRMAN: Thank you, Mr. Young.

18 MR. YEE: Yes, Mr. Young, you
19 mentioned that your analytical methodology, and I
20 would imagine your collection methodology, you had
21 some discussions with Manitoba Water Stewardship
22 on. Does this also include where you established
23 your sampling sites?

24 MR. YOUNG: Yes, it did, sir. And we
25 had a very thorough discussion of this, because

1 this is very important to us. Now, obviously
2 there are a couple of things that are obvious.
3 One, we want to know what it is at the point of
4 discharge, and the upstream site, well, we were
5 measuring after all for these municipalities, and
6 we went towards the southern boundary of Reynolds,
7 which is a large municipality. We also went south
8 of the place where there are -- there are
9 virtually no houses, residences, and there is
10 almost no agriculture upstream of our first point.
11 The exception to that is there is a small area
12 which drains into Whitemouth Lake, which is the
13 origin of the Whitemouth River, that has a little
14 bit of I think forage land. I have never seen it,
15 sir, but there is a little bit there. So, those
16 gave us upstream and downstream, and then we set
17 another point at 506 because that would tell us
18 what was happening in the Hadashville Medika area.
19 And remember that we are doing this knowing
20 nothing about what results we are going to get as
21 the results start to come in. This is before we
22 began.

23 We then came downstream to highway 44.
24 There is an obvious location, there is an old
25 hydrological monitoring station there, and that

1 would take into account the flow from the Birch
2 River and from the Kelner Creek, which we hadn't
3 become suspicious of at that point, and also
4 include the Medika area, and then finally the
5 downstream one.

6 Now, after one year, we had a couple
7 of people approaching us saying, well, you should
8 be monitoring Kelner Creek, and we have been doing
9 so at five years and we haven't arrived at any
10 fine, firm conclusions about that yet. And it was
11 also suggested that maybe there might be bacterial
12 contamination, which is one of our major concerns,
13 coming from Whitemouth, because of a lagoon here
14 and so on. And we established an additional
15 station then in the third year of testing
16 downstream from Whitemouth. By the way, we
17 haven't found anything to cause us to believe that
18 that was really necessary. However, we continue
19 with those stations.

20 Now, the decisions as to where they
21 would be located were a combination of local
22 knowledge, common sense, and of course the
23 technical advice of, and I will name specifically
24 Miss Wendy Raleigh from the water agency, which
25 changed its name three times during the six years

1 I believe.

2 MR. YEE: Thank you. Just one other
3 question, Mr. Young. You mentioned that you did
4 change your sampling frequency. I would also ask,
5 unfortunately because I don't have your report,
6 were the sample events occurring each of the
7 successive years taken at certain times of the
8 year, i.e., in the springtime, in the fall, that
9 kind of thing?

10 MR. YOUNG: Yes, sir. There are
11 really two questions there. I would like to
12 answer your question in two parts. First of all,
13 we established the frequency at the beginning
14 because we didn't have any idea what we would
15 find. Money is always a problem for us. And so
16 as time went on, we discovered that we weren't
17 finding much fluctuation over time, and so we
18 reduced from 13 tests the first two years, to 11
19 tests, to 7 tests. I think I'm right about the
20 11. If anything I just said about the number of
21 tests is contradictory of what we have submitted,
22 then what we have submitted is correct. I'm going
23 from memory here.

24 So the first thing was the frequency
25 of the tests. The timing we set at the beginning

1 of the year, and originally we were testing
2 intervals of about two and a half weeks, and now
3 we are testing more at four weeks. We did do
4 tests through the ice in the winter time. They
5 weren't producing anything that we could interpret
6 usefully, and we have abandoned those in favour of
7 summer open water period testing, particularly in
8 the light of, you know, argument concerning
9 run-off from farmlands and whether or not there is
10 a big flush in the spring and so on. By the way,
11 we haven't found any such pattern, as you will see
12 from the figures. The numbers fluctuate within
13 narrow ranges. They go up and down for reasons
14 that we can't understand, but they go up and down
15 so very little. Like when I say it is around .04
16 parts per million and we go to four decimal points
17 in order to try to track that, we are finding
18 that, I think on one occasion we found one that
19 was up about .06, and one that was about .025, but
20 they are always between 3 and 5. Very narrow.

21 MR. YEE: Thank you.

22 MR. MOTHERAL: Thank you, Mr.
23 Chairman. Mr. Young, are there -- do you have
24 many intensive livestock operations in your soil
25 association area?

1 MR. YOUNG: Well, sir, first of all,
2 I'm not a farmer. And secondly, we had not done a
3 particular assessment of the farms in the area.
4 And finally, I'm never quite sure what intensive
5 livestock operation -- sometimes that has
6 definitive meanings. In our report we have from
7 the Department of Agriculture obtained the
8 agricultural census data for the most recent one
9 available, which is, unfortunately, at the time
10 this was prepared was 2001. And the cattle and
11 calves totaled 5,924 at that time, in the two
12 municipalities. Hogs were just under 30,000.
13 There were a few sheep and there are about 350,000
14 chickens and hens. Now, I have been informed by
15 farmers, and this is just informally and casually,
16 that the number of farms has probably declined a
17 little, and that the populations of livestock is
18 probably about the same or maybe up a little. And
19 this is just, again, we are waiting for the
20 current agriculture census. Now, I don't know how
21 fully that answers your question.

22 MR. MOTHERAL: No, it is fine. You
23 lead to my next question too. I was going to ask,
24 has there been any expansion of hog operations
25 during your six year study?

1 MR. YOUNG: Certainly, I know from
2 personal knowledge that some hog operations have
3 been expanded, I think some have been abandoned.
4 They are others that are more competent to speak
5 to you on that issue, sir, than I.

6 MR. MOTHERAL: Will there be some of
7 that information in our forthcoming -- in your
8 presentation? Will it be more in the written
9 report?

10 MR. YOUNG: No, sir, we are reporting
11 to you on water quality. And as to the actual
12 numbers of farms and so on, we don't have that
13 information.

14 MR. MOTHERAL: You are answering my
15 question. Thank you.

16 MR. YOUNG: We don't have that
17 information, that has not been part of our --

18 THE CHAIRMAN: Thank you very much,
19 Mr. Young. We look forward to reviewing your
20 report.

21 Victor Wohlgemuth, please state your
22 name for the record?

23 MR. WOHLGEMUTH: My name is Victor
24 Wohlegmuth.

25

1 VICTOR WOHLGEMUTH, having first been duly sworn,
2 presented as follows:

3 MR. WOHLGEMUTH: As I already said, my
4 name is Victor Wohlgemuth. I farm in the RM of
5 Reynolds. I would like to take a moment and thank
6 the board of the Clean Environment Commission for
7 listening to what the farmers in Southeastern
8 Manitoba are doing to clean up the environment. I
9 would like to thank Dave Young for his
10 presentation and for the hard work he has been
11 doing in gathering all of the data. I'm here on
12 behalf of myself and the farmers in my area.

13 I am here to tell you how us farmers
14 are doing our best to have a clean environment on
15 our farms. Most farms have taken environmental
16 farm plan workshops and have identified the risks
17 on their farms. There used to be a lot of small
18 farms along the river, with livestock roaming on
19 the river banks and manure from those farms was
20 spread in an area not far from the barns. Today
21 those farms are almost all gone. The families
22 have moved to the cities for better jobs, and now
23 we have people moving back to the rural areas
24 complaining about animal waste and the smell of
25 our livestock. And some of those people are

1 pleased with the way we manage our livestock. Our
2 manure is not waste, it is fertilizer for our
3 crops. Some of those same people have told us how
4 the river water used to smell when there were
5 farms in the old days. We know today our rivers
6 and streams that flow into the Whitemouth River
7 are clean, and we have the data to prove it.

8 I'm a farmer and I do not want our
9 river being polluted by our waste nor anybody
10 else's, for we and our children fish, swim, canoe
11 and play in our rivers. May I add here too that
12 there are people from Winnipeg that come and fish
13 in the river too and there is many fish in there.

14 Many people get their water from the
15 Whitemouth River. When it comes to manure and
16 odour issues, we as farmers don't like the smell
17 and if we could raise pigs with no smell, we
18 would.

19 Some hog producers cover their lagoons
20 with straw covers to reduce odours. This costs
21 money and creates problems when pumping the
22 lagoon, but is done to be a better neighbour.
23 When it comes to manure, the farmers within 300
24 animal units are required to complete manure
25 management plans, but many smaller producers are

1 following the guidelines anyway.

2 In the past, manure was just spread on
3 the surface, and now most manure is injected into
4 the soil. This helps reduce odours and conserves
5 nitrogen and reduces run-off of nutrients. Myself
6 and other farmers in my area have hired
7 consultants such as AgriTrend to develop a
8 nutrient management program. This includes
9 testing manure and soil testing. And may I add
10 here, we don't just do one test per field, it is
11 many tests per field. The results are used to
12 determine the amount of nutrients in manure to
13 know if any commercial fertilizer is needed to
14 grow crop. And may I add here too that at least
15 for myself, I have started putting fertilizer on
16 at different times in the growing season when
17 plants can use it most, so we do the best that we
18 can for the environment to have as little leaching
19 into the soil as possible.

20 If it is a wet year, there is not need
21 to put extra fertilizer on if it is just going to
22 leach away. With the price of fertilizer, farmers
23 do not want to have to purchase any more than they
24 have to. With nitrogen and phosphorous priced at
25 over \$500 per ton, it will not be overapplied in

1 our area. Most of our land in our area is
2 deficient in phosphorous.

3 Rural depopulation is an issue. The
4 hog industry is important in the area for
5 producers to have their children stay in the area.
6 The hog and cattle farms in the area are family
7 farms. The margins in the hog industry are very
8 tight, and it is important to have the possibility
9 to expand to make a living.

10 We have seen what is happening in the
11 cattle business. The margins are tight, the
12 farmers are diehards, they just don't give up, but
13 when we have to work with mother nature, markets
14 that get slammed shut because of BSE, rising
15 inputs, a government that stops all hog expansion
16 overnight, some farmers are just giving up.

17 What will be required of farmers in
18 the future? Manitoba hog farmers are the most
19 regulated. We as farmers are doing our best for
20 the environment and something has to change so we
21 do not lose any more farms. Statistics Canada
22 reports that Manitoba has lost 750 beef farmers in
23 the last two years. We cannot be like Winnipeg
24 and dump our manure straight into the river when
25 we have had too much rain to empty our lagoons.

1 May I add here, I wish I had a little input with
2 what Winnipeg was doing with their manure.

3 Farmers in Manitoba are being unfairly
4 targeted for the phosphorous amount that hog
5 farmers are contributing to Lake Winnipeg,
6 something that they have had a very small impact
7 on.

8 In conclusion, your honour, when the
9 Clean Environment Commission makes its ruling,
10 remember Dave Young has supplied all of the data
11 for the last six years on the Whitemouth River,
12 and we know the river is clean and we are doing a
13 good job in keeping our river clean. If there is
14 going to be any credits, our area should be
15 getting extra credits for diluting the amount of
16 phosphorous in Lake Winnipeg. If the rules are
17 too stringent, we will see a large exit from the
18 farms that still exist, and then we will see more
19 corporate farms with larger amounts of manure
20 stored in one location and the risk of a larger
21 spill. Rural depopulation is an issue and the hog
22 industry is important in the area for producers to
23 have their children stay in the area, and hog and
24 cattle farms in the area are family farms. We do
25 not want to see farmers moving to the city for

1 jobs and to see our children's schools and towns
2 disappearing.

3 Thank you for taking the time to
4 listen to the farmers who work in the industry on
5 a daily basis. Farmers care about the environment
6 and we want our children to have a clean
7 environment with clean water.

8 And may I add too, we saw on that
9 slide that truck was supposedly spreading manure
10 on the road, I didn't know that the RM spread
11 manure when they were actually putting on calcium.

12 MS. PIP: That was a Hutterite Colony.

13 MR. WOHLGEMUTH: I stand to be
14 corrected.

15 THE CHAIRMAN: Thank you,
16 Mr. Wohlgemuth. What type of farm operation do
17 you have?

18 MR. WOHLGEMUTH: I have cattle, grains
19 and hogs.

20 THE CHAIRMAN: How many cattle and how
21 many hog?

22 MR. WOHLGEMUTH: 130 cows and I have
23 2500 hogs.

24 THE CHAIRMAN: The hogs, are they
25 feeders or --

1 MR. WOHLGEMUTH: They are isoweans.

2 THE CHAIRMAN: Isoweans, and how much
3 land?

4 MR. WOHLGEMUTH: I farm approximately
5 1400 acres.

6 THE CHAIRMAN: So you have enough of
7 your own land for spreading the manure?

8 MR. WOHLGEMUTH: That's right. And
9 most of the farmers in the area, if not all, have
10 plenty of land.

11 THE CHAIRMAN: Thank you. Gentlemen?

12 MR. YEE: Yes, Mr. Wohlgemuth, you
13 mentioned that your soil characteristics are low
14 in phosphate. But does the changes or amendments
15 to the phosphate regulation have significant
16 impacts to your operation?

17 MR. WOHLGEMUTH: Not for me. For one
18 thing, I grow lots of alfalfa so that can pull a
19 lot of phosphate out of the soil. But we spread,
20 our manure is spread maybe once every three years
21 on the same land. I mean, that is really strict
22 guidelines.

23 MR. YEE: Again, just on that same
24 thing, you mentioned in your presentation that you
25 are concerned about the amount of regulations. Do

1 you foresee impacts on your particular operation
2 should there be additional regulatory requirements
3 in the future?

4 MR. WOHLGEMUTH: Well, if there is too
5 much, I mean, especially smaller farmers, you just
6 can't -- they don't have the margin to work with
7 to have to incur a bunch of large expenses.

8 MR. YEE: Thank you.

9 MR. MOTHERAL: No, I really don't have
10 anything. I think it has been covered. Except I
11 wasn't going to call you by your last name, I was
12 going to say Victor, it is easier.

13 MR. WOHLGEMUTH: That is no problem.
14 It is not the first time.

15 MS. PIP: Mr. Chairman, if the
16 Commission wishes to review that slide, on the
17 door of that truck it says Grand Valley Farms.

18 THE CHAIRMAN: Okay. We thank you for
19 that.

20 MS. JOHNSON: Mr. Chairman, can we
21 take a break? We have got tired fingers here.

22 THE CHAIRMAN: Okay. We will take our
23 break now and reconvene in 15 minutes.

24 (PROCEEDINGS RECESSED AT 3:15

25 AND RECONVENED AT 3:30 P.M.)

1 THE CHAIRMAN: Could I ask you to take
2 your seats, please? We have four more people who
3 have indicated that they wish to speak this
4 afternoon. First is Carol Clegg.

5 MS. CLEGG: Good afternoon, Mr.
6 Chairman, members of the review panel, ladies and
7 gentlemen. My name is Carol Clegg and I'm a
8 resident of the Rural Municipality of Lac du
9 Bonnet.

10 CAROL CLEGG, having first been sworn, presented as
11 follows:

12 THE CHAIRMAN: Please proceed.

13 MS. CLEGG: This is not an
14 intellectual treatise. It is an appeal from the
15 heart with the hope that someone will listen to
16 the people of rural Manitoba whose communities
17 cannot sustain a further onslaught of intensive
18 hog operations, in future referred to as ILOs.

19 I grew up on a farm in southern
20 Manitoba. I understand the farmer's connection to
21 the land.

22 In July 1988, a hog sewage lagoon
23 situated on the Whitemouth River broke open during
24 a rain storm, spewing its contents into the river
25 and killing all of the fish along a six mile

1 stretch to the confluence of the Whitemouth and
2 the Winnipeg. Several residents drawing drinking
3 water from the river fell ill. With no objections
4 from either the Rural Municipality or the
5 Department of Environment, a new and larger lagoon
6 was constructed on the same location.

7 Subsequently, the lagoon was emptied by means of a
8 walking gun with sewage sprayed on a small field
9 alongside the river and adjacent to our acreage.

10 When we formed a citizen's action
11 group, we began receiving calls from desperate
12 people across the province. All were concerned
13 about contamination of ground and surface water by
14 a rapidly expanding hog industry. Most lived near
15 malodorous barns and lagoons, imprisoned in their
16 houses in the summer, and unable to move because
17 their property was worthless. That is when I
18 realized that intensive hog operations had nothing
19 to do with farming. The idea of a confined animal
20 operation could have never originated with a
21 farmer. Farmers practice animal husbandry, which
22 is quite a different concept.

23 At some time in our recent history,
24 provincial politicians and bureaucrats became
25 convinced that pork would be the engine to drive

1 the Manitoba economy forward.

2 The Pork Council was established with
3 public funding to accomplish that end. The
4 Agriculture, Conservation and Municipal Affairs
5 departments went into action to implement the
6 agenda. The first step was to eliminate single
7 desk selling of pigs. All of the stops were
8 pulled to locate Maple Leaf Processors in Brandon,
9 in spite of grave concerns for the Assiniboine
10 River. Rural municipalities with no planning
11 bylaws were targeted as locations for barns.
12 Rural councils were wooed with promises of jobs
13 and tax revenue. Soon barns were clustered along
14 Manitoba's rivers and lakes, or where aquifers
15 could supply copious quantities of water the
16 slurry system of manure handling required.

17 The stench from barns and lagoons in
18 hot summer evenings, persistent odour from manure
19 saturated fields thawing in spring, dead pigs
20 floating down rivers, piles of decomposing
21 mortalities in the fields, spills, leaks, and
22 hordes of flies swiftly convinced rural Manitobans
23 that intensive hog operations were not quite as
24 neighborly as the guy with the few pigs rooting in
25 the pasture.

1 When they banded together to try and
2 arrest the blight on their landscape, the province
3 counter attacked. The Farm Practices Protection
4 Act gave agriculture operations virtual immunity
5 from court injunctions and denied the neighbors
6 their civil rights to sue hog factories for
7 persistent and noxious odour. Technical review
8 committees, appointed by the province, sat in
9 urban offices writing reports based on information
10 supplied by the proponent. Their reluctance to
11 venture out in the field to determine the lay of
12 the land sometimes left rural folks laughing. In
13 the technical review of a recently approved hog
14 operation in Lac du Bonnet, sizeable acreage of
15 spread lands was listed as tree covered.

16 When rural councils began to use
17 municipal planning to control ILO expansion, they
18 were badgered by provincial land use planners to
19 agree to minimal setbacks from the Farm Practices
20 Guidelines.

21 When some councils mentioned ILO
22 bylaws, the government rewrote the Planning Act.
23 This eviscerated the conditional use process and
24 removed all control of manure management from
25 local government.

1 In 2000, I appeared before the
2 Livestock Stewardship Review Panel, calling for an
3 immediate ban on liquid manure storage lagoons and
4 a moratorium on ILO expansion. In the interim,
5 the panel reported, and with only a few cosmetic
6 changes, the hog industry grew apace. But the
7 ruthless chase for the pork dollar resulted in a
8 fatal mistake.

9 Olymel and its partners were invited
10 to locate a processing plant in the City of
11 Winnipeg. All hell broke loose. Trucks hauling
12 pigs make noise. Pigs stink. They also scream on
13 their way to slaughter. This would be altogether
14 too unpleasant for delicate city folks. City and
15 province saw votes slipping away daily as the
16 OlyWest imbroglio continued. Something had to be
17 done. A moratorium was imposed, but not before a
18 number of hog barn applications on the books were
19 hastily approved.

20 How much further will our government
21 sponsored pork industry go to ensure that
22 expansion proceeds? An article, Friday, April 6,
23 2007 in the Morden Times states: On March 5th,
24 the Commission, Clean Environment Commission,
25 began an eight week series of 17 public hearings

1 scheduled for 14 communities. Meanwhile, in an
2 effort to get more information out to the general
3 public about the industry, Manitoba Pork Council
4 has launched a multi-media education campaign
5 which will run until May. The multi-pronged
6 approach includes television commercials, radio
7 spots and inserts into the newspapers.

8 This four page piggy spread, "Straight
9 Talk On Pork," Winnipeg Free Press, March 4, '07
10 is the coup de grace. Methinks they do protest
11 too much. Since this feature, costing
12 approximately \$75,000, was at least partially paid
13 for by my tax dollar, I feel I have the right to
14 offer my perspective on it. I will comment
15 section by section.

16 The water we drink: The liquid manure
17 system used in most ILOs is a colossal waste of
18 water. Staggering amounts of clean water are
19 drawn from ground and surface sources to service
20 the industry. Once the water is run through the
21 hog or used to wash manure from the barn, it is no
22 longer available for human use. Untreated slurry
23 containing pathogens, growth hormones,
24 antibiotics, chemical disinfectants and excessive
25 amounts of nitrogen and phosphorous overspread on

1 inappropriate lands pretty well assures that some
2 of it ends up in our waterways.

3 The RM of Whitemouth, Seven Sisters
4 Falls, and RM of Lac du Bonnet are just a few of
5 our rural communities with boil water orders.
6 Lake Winnipeg is dying. We depend on our rivers
7 and wells for drinking water. City residents are
8 guaranteed clean water. To us it seems as though
9 industrial agriculture is guaranteed the right to
10 pollute our water. When the Conservation
11 Department endorses open pit hog sewage lagoons,
12 how can we believe the water strategy is serious?

13 The air we breathe: I invite you to
14 spend a summer evening outdoors anywhere within
15 five miles of a hog lagoon and you will understand
16 why I'm here. Odour is the number one complaint
17 about the hog industry. Emission from barns and
18 lagoons is a well known health hazard. Citing
19 health concerns in 2002, the Canadian Medical
20 Association called for a moratorium on factory hog
21 farms. When the nearby hog operation expanded, I
22 voiced my concerns, and was intimidated and
23 threatened. Eventually, I was forced to give away
24 my comfortable home and move out of the area.

25 The economy that we create and the

1 jobs we need: Is this the type of economy
2 Manitoba needs to become a "have province?" Would
3 you want your sons and daughters to spend their
4 entire lives working on the killing floor, or as
5 technicians in a stinking confined animal
6 operation? I think you should find out who takes
7 the wretched jobs in the Brandon plant. I would
8 classify them as exploitation of labour rather
9 than highly desirable jobs. Surely Manitobans are
10 resourceful enough to do better for ourselves.

11 The food we eat: I heard an
12 announcement recently that Wal-Mart plans to go
13 organic. I notice that all of the big grocery
14 chains are expanding their organic sections. This
15 tells me that consumers are becoming more
16 discriminating in their food choices. The time is
17 rapidly approaching when they will refuse to eat
18 pork laden with antibiotics and growth hormones
19 and produced in inhumane conditions. Why would a
20 province, which purports to value its food
21 industry, voluntarily lag behind prevailing
22 consumer opinion? With rising energy costs and
23 increasing concern for food safety and security,
24 thinking people are turning back to local and
25 smaller food suppliers. Small farmers are coming

1 back into the picture.

2 Laura Rance, the associate editor of
3 the Farmer's Independent Weekly, in an analysis of
4 the Canadian pork industry concludes,

5 "Why, when big isn't working, is the
6 only solution to prop up the system so
7 it can keep getting bigger?"

8 Winnipeg Free Press, October 7, '06.

9 If an industry really is sustainable,
10 it should not require so many adjustments to make
11 it fit into the landscape. Its footprint on the
12 land should be barely discernible. Unfortunately,
13 Manitoba is not the only place where factory hog
14 barns have left big tracks. Let me refer to North
15 Carolina because the situations are parallel.

16 North Carolina is a coastal plain with
17 streams emptying eastward into a large estuary.
18 Manitoba is a flood plain with waterways and
19 wetlands draining into Lakes Winnipeg, Manitoba
20 and Winnipegosis. In the last decade swine
21 production soared to over 10 million in North
22 Carolina and over 8 million in Manitoba. In North
23 Carolina nutrient overload from the swine industry
24 contaminated ground and surface water causing
25 major eutrophication and species kill in the

1 estuary. We are all here because Lake Winnipeg is
2 covered with algae.

3 The North Carolina House Committee on
4 Agriculture recently approved a three year
5 extension to its ten year moratorium on new barns
6 and lagoons. Manitoba too declared a moratorium
7 on expansion. What will happen next?

8 Will this government go down in
9 history as the one that abandoned Manitoba's
10 waterways and rural communities to the ravages of
11 the corporate hog industry, or will it learn from
12 sad experience in other jurisdictions and use this
13 moratorium to begin the long process of restoring
14 agriculture to the sustainable activity it once
15 was.

16 As an already cynical rural Manitoban,
17 I fear the moratorium is only a brief interlude
18 while the government concentrates on an election.
19 I suspect that it will be swiftly repealed, Hytec
20 will be refinanced with public money, and the
21 processing plant will be built outside the City of
22 Winnipeg. I will be delighted if you prove me
23 wrong.

24 THE CHAIRMAN: Thank you, Ms. Clegg.

25 MR. MOTHERAL: I just have one

1 question, Ms. Clegg. When you said small farmers
2 are coming back into the picture, do you have any
3 stats on that at all?

4 MS. CLEGG: I don't have statistics,
5 but I know people who are now buying their meat
6 from small farmers because of the BSE crisis. And
7 I do know that the younger generation of consumers
8 are going to the organic stores, in the city I see
9 this. I see more people going to farmer's markets
10 to buy their vegetables.

11 There are even experts, if you take
12 John Aiker from the University of Missouri, he is
13 now talking that farming is going to have to turn
14 around and go back to smaller. I know that with
15 rising costs of simply shipping food long
16 distances, it doesn't make sense, you know, to
17 keep bringing food from far away places. People
18 are going to have to go back to buying local.

19 THE CHAIRMAN: Edwin?

20 MR. YEE: Just a point of
21 clarification, Ms. Clegg. I think I understand
22 what you say in terms of the amendments to the
23 Planning Act, because you mentioned it eviscerated
24 the conditional use process and removed all
25 control of manure management. The removal of

1 manure management I understand, but I wasn't sure
2 I understand what you mean by eviscerating the
3 conditional use process?

4 MS. CLEGG: At conditional hearings in
5 the rural municipality, if you can't talk about
6 manure, which is the crux of the whole matter,
7 then the process is a sham.

8 MR. YEE: Thank you.

9 THE CHAIRMAN: You also said with
10 respect to the insert in the Free Press, that it
11 was paid in part by taxpayer's dollars?

12 MS. CLEGG: Yes, I understand that the
13 Pork Council receives public money.

14 THE CHAIRMAN: I'm not certain of that
15 so I can't comment on that. Thank you very much,
16 Ms. Clegg, for coming out this afternoon.

17 MS. CLEGG: Thank you.

18 THE CHAIRMAN: Rick Vaags. Will you
19 please state your name for the record?

20 MR. VAAGS: I am Rick Vaags.

21 RICK VAAGS, having been sworn, presented as
22 follows:

23 MR. VAAGS: My name is Rick Vaags. I
24 guess had I known about the telephone interview
25 portion, I might have gone that route instead of

1 this, but here I am.

2 My name is Rick Vaags and my father
3 Bill Vaags and myself are from the Dugald area.
4 For 45 years we have been involved in both grain
5 and hog production. I would like to talk about
6 the history of our farm in relation to the topics
7 of this hearing.

8 When my dad started out in the '60's,
9 we had 480 acres and 200 pigs. The scale of
10 economics have dictated to expand by purchasing
11 land and local barns when they became available.
12 Today our farm has expanded to 1200 sows, farrow
13 to 50 pounds, and farm just under 4000 acres. We
14 employ five full time staff members outside of the
15 family. We are considered a small producer for
16 feeder pig sales, and consequently our available
17 pigs per week are not as attractive to a buyer as
18 the larger groups would be.

19 We have gone from 1500 gallon tank
20 broadcasting manure for three weeks from one barn
21 to presently hiring custom applicators and
22 injecting the entire operation's annual manure
23 volume, over 400 acres, in three days. This
24 transformation has taken us from 1500 to 4000
25 gallon tankers, to big gun sprinklers, to building

1 our own injector, and finally to hiring custom
2 applicators. We use crops that can utilize manure
3 nutrients effectively, so manure injections are
4 followed by canola, corn or winter wheat. Other
5 crops used to go deeper in later rotations are
6 sunflowers and alfalfa.

7 Manure management plans have been
8 recorded since becoming mandatory to both the
9 municipality and as well as the Conservation
10 Department. Annual water sampling was done with
11 the feed company long before it became compulsory
12 by the province, and have not noticed any changes
13 in the reports from previous years.

14 If I look back over the last 30 years,
15 what we did for manure application was similar to
16 the small farms we took over. We do soil testing
17 on every field, every year, and we know what
18 livestock farms used to do was spread manure as
19 close to the yard as possible. Over time this has
20 evolved to be much more of an awareness of the
21 balance of the nutrients from manure and the crop
22 removal rate. The quality of our soil has
23 improved as our best crops are always on manure
24 injected land. We have 2100 acres within pumping
25 distance of our farm and want to bring all of

1 those acres into the manure management area.

2 Odour from our operation I believe has
3 decreased over the years as application and
4 agitation times have been drastically reduced. I
5 am convinced that most hog farms, as ours, have
6 been educated and evolved over the years and are
7 concerned about being good stewards of the land
8 and water. We live within 400 feet of the barns
9 and drink the same well water. I want to leave
10 this soil and water in as good a condition, should
11 one of my four sons or anyone else taking over
12 this farm after me.

13 As attitudes change towards manure
14 storage, I would hope that the government will
15 assist in the cost of improvements to a greater
16 extent than currently for existing operations.
17 Through the environmental farm plan there is
18 provision for 30 per cent funding, as well as the
19 Conservation Department adding \$5,000. In
20 neighboring provinces I understand the amount of
21 funding to be closer to 90 percent.

22 I'm very concerned about the direction
23 the province has taken their so-called pause in
24 the hog industry. I don't hear of a pause in any
25 other phosphorous producing sector, whether it be

1 agricultural, residential or recreational. Why
2 should the most proactive agriculture sector be
3 continually scrutinized while others are not even
4 on the radar. As a U of M soil scientist wrote in
5 a recent letter to the editor, "the phosphorous
6 issues has been contributed to by a lot of areas,
7 let's stop pointing fingers and work together to
8 resolve the issues." Thank you.

9 THE CHAIRMAN: Thank you, Mr. Vaags.
10 The 90 per cent, could you elaborate a bit on
11 that?

12 MR. VAAGS: From talking to some of
13 the environmental farm planning people, they tell
14 me that Ontario is up to 90 per cent funding for
15 covering of lagoons or something of that nature.

16 THE CHAIRMAN: For covering lagoons?

17 MR. VAAGS: For manure storage
18 improvements, what they deem to be an improvement,
19 it could be a lagoon cover, I'm not sure what, but
20 that was given to me by the environmental farm
21 planning people.

22 THE CHAIRMAN: What would a typical
23 lagoon cover cost?

24 MR. VAAGS: It is about a buck ten a
25 square foot.

1 THE CHAIRMAN: Okay. How many square
2 feet?

3 MR. VAAGS: An acre is 43,000 square
4 feet, so if a lagoon is a couple of acres, you are
5 looking at \$80,000 to \$100,000 for the cost of the
6 lagoon.

7 THE CHAIRMAN: Okay.

8 MR. YEE: Mr. Vaags, I don't want to
9 put you on the spot or anything, but you mentioned
10 in your presentation the scale of economics is
11 dictated to expanding by purchasing land and local
12 barns. Can you just explain that in terms of, is
13 it because of the margins involved in livestock
14 operations today?

15 MR. VAAGS: Yes, it is definitely the
16 margins. As I went on further to mention there
17 that an operation of our size selling 50-pound
18 feeder pigs is just on the edge of where they find
19 it attractive to -- a lot of these farms would
20 rather have 2000 feeder pigs to fill a barn, it is
21 all in, all out process, and we are just on the
22 edge of being viable. I'm looking down the road
23 saying, I am not sure if that will be viable in 10
24 years. There is a \$2 to \$4 premium right now if
25 you have a group of 500 per week or 200 per week.

1 MR. YEE: And I guess an associated
2 question I would have then is, if there would be
3 additional regulatory requirements, this would
4 obviously be a financial burden, given your
5 operation?

6 MR. VAAGS: It is definitely a burden
7 to anybody, yes.

8 MR. YEE: Thank you.

9 MR. MOTHERAL: Yes, thank you,
10 Mr. Chairman.

11 Mr. Vaags, in your operation, what
12 would be the cost of your custom application? You
13 say you have custom applicators come and inject
14 your --

15 MR. VAAGS: We would probably pay them
16 somewhere between \$25,000 to \$35,000 a year,
17 depending on how many gallons. The custom
18 application rate is probably in the range of .07,
19 like three quarters of a cent to maybe 1.
20 something, 1.2, if you start doing it with
21 tankers. All of our manure is done through
22 pipeline so there is no impact on the roadway. So
23 that is a little bit cheaper than if you start
24 using tankers to haul manure.

25 MR. MOTHERAL: We heard over our

1 travels in the province there is getting to be
2 quite a few operations are moving towards custom
3 application. Do you feel as though custom
4 application, do you do it because of cost, do you
5 do because of environment, you think they are more
6 environmentally friendly?

7 MR. VAAGS: We did all of our manure
8 application for many years, as I mentioned in my
9 speech here, and I would like to do it myself but
10 the cost is so prohibitive. When these people
11 come into your property, they are coming in with
12 probably half to three quarters of a million
13 dollars worth of equipment. So that puts it out
14 of the range of average producers. Plus they come
15 in, and like I say, within three days they can do
16 an annual amount of manure on the land. So to me
17 it is a lot more environmentally friendly and a
18 lot more neighborly to have that amount of odour
19 reduced then, to spread it. If I did it myself,
20 then it would take longer, plus you are involved
21 with harvesting or, you know, there is other
22 things on the farm, so you wouldn't be putting in
23 the long days that these guys do. And also as the
24 farms go to high health, there is a biosecurity
25 standpoint, you don't want to have workers going

1 in the barn and out of the barn to take care of
2 that job, so we decided to farm that out.

3 MR. MOTHERAL: One more question, do
4 you do your own soil sampling or does that
5 particular operation do the soil sampling also?

6 MR. VAAGS: No, we farm that out to
7 another independent body.

8 MR. MOTHERAL: Okay.

9 THE CHAIRMAN: When you say 25 to
10 35,000, is that for three days of work?

11 MR. VAAGS: Yes.

12 THE CHAIRMAN: It sounds like a good
13 business.

14 MR. VAAGS: Yes.

15 THE CHAIRMAN: So you say that your
16 operation at 1200 sows is borderline?

17 MR. VAAGS: Yes, for what we are doing
18 it is borderline. For, like I say, if you can't
19 put together 500 feeder pigs -- it is all about
20 single source, they don't want to commingle pigs,
21 so it is about single source. So if we can't
22 produce more -- a semi-load is about 500 pigs per
23 week of 50 pounders, small animals. And that is
24 kind of just -- like I alluded to earlier, I mean,
25 there is a \$2 to \$4 premium if you have bigger

1 groups.

2 THE CHAIRMAN: Can you expand?

3 MR. VAAGS: That would be a challenge.

4 THE CHAIRMAN: Because of the costs or
5 just the work?

6 MR. VAAGS: Well, like I mentioned
7 here, we have 4000 acres, I have 2100 acres within
8 pipeline reach. We have clay soils. We have
9 everything in our favour there. The municipality
10 is not very friendly to expanding livestock, so I
11 would say even though in my mind we have
12 everything necessary to expand, it would be quite
13 a challenge to expand.

14 THE CHAIRMAN: It would be largely the
15 municipality that would be the roadblock in that
16 regard?

17 MR. VAAGS: Definitely.

18 THE CHAIRMAN: Okay. I don't have any
19 further questions. Thank you very much,
20 Mr. Vaags.

21 John Steendam. Please state your name
22 for the record?

23 MR. STEENDAM: John Steendam.
24 John Steendam, having been sworn, presented as
25 follows:

1 MR. STEENDAM: Thank you for providing
2 me the opportunity to address the Clean
3 Environment Commission. My name is John Steendam,
4 and I'm the owner/manager of Springfield
5 Fertilizer in Dugald, Manitoba.

6 While this Commission is specifically
7 focused on the hog sector, I am here today because
8 I believe that the agriculture industry is a
9 complex matrix of inputs and outputs, and some of
10 the areas being deliberated by this Commission
11 must be viewed in the context of the whole, rather
12 than the individual parts.

13 I have been involved in the nutrient
14 industry for the past 25 years. Over that period
15 of time many changes have occurred in the
16 agriculture industry in Manitoba, and the economic
17 balance of agricultural production between field
18 crops and livestock has certainly changed. Even
19 the mix of grains and oilseeds grown has seen a
20 dramatic change. New crops have been introduced
21 and there is now a much stronger emphasis on feed
22 grain production to support the growing livestock
23 industry than there was 25 years ago.

24 For someone like myself, in the farm
25 service industry, there is a constant challenge to

1 stay ahead of these changes and to assist farmers
2 in making the right decisions for the right
3 reasons with the best available information.

4 The biggest area of growth has been in
5 the science and technology behind crop input
6 management and in good stewardship practices. It
7 has been said that agriculture is second only to
8 medicine in adopting new technology, and in my
9 experience this would certainly be true. For
10 example, 25 years ago farmers chose the crops they
11 were going to grow on a given field based on the
12 year of rotation. The farmer knew approximately
13 how much nutrient it would take to grow that crop
14 according to a chart and experience, and they
15 would purchase that amount of fertilizer and
16 spread it out on the field as evenly as they
17 could.

18 Today crop rotation is only one of the
19 factors used to determine what should be grown on
20 a particular field. Generally speaking, that
21 determination is also made by what options are
22 available based on the results of a soil sample,
23 economics, and a much wider variety of cropping
24 choices. The farmer and his dealer then determine
25 the amount of nutrient already available in the

1 field from the soil sample and calculate the
2 top-up nutrient and micro nutrient required to
3 grow that crop. Once that has been assessed, the
4 dealer then uses a computer calibrated blending
5 system to ensure that the farmer receives exactly
6 the right mixture. This mixture is then weighed
7 with equipment that is checked by the province to
8 ensure that the calibration is accurate. From
9 there it is transferred to a fertilizer spreader
10 where it is spread across the field on a grid.
11 The grid is created by a GPS unit in the machine
12 that actually steers itself across the field.
13 Meanwhile, the onboard computer constantly
14 calculates and controls the amount of product
15 being applied to ensure that no more nutrient than
16 is absolutely required is put down in any one area
17 of the field. While not everyone is using the
18 full extent of this technology yet, it is becoming
19 much more common.

20 It is interesting to note that five
21 years ago GPS technology was a fairly new concept
22 that had been adopted by a few dealers. Now most
23 dealers incorporate it in their spraying and
24 spreading operations. Five years has radically
25 changed what is done and how it is done. By

1 contrast, a study commissioned for regulatory
2 purposes is considered relatively current if it is
3 five years old. There is often a disconnect
4 between the length of time it takes to study a
5 problem and make conclusions, and the change
6 within the industry and advances over that same
7 period of time.

8 To get back to my point, the use of
9 new technologies and more accurate assessment in
10 placement of nutrients reduces the potential for
11 over fertilization and potential contamination,
12 and ensures that the farmer is not wasting money
13 on unneeded inputs. For some reason, our
14 customers see that economic factor as being very
15 important.

16 Seriously though, given the extremely
17 tight margins in grain production over the past
18 several years, the economic reality is that
19 farmers cannot afford mistakes. They must be
20 extremely vigilant in calculating the cost of
21 their inputs. In addition, their land is their
22 livelihood. Farmers don't want to create an
23 environmental liability by contamination or by
24 oversupplying nutrients to the land and water.
25 The good news is that when a mistake has been made

1 and there is a high nutrient load, it can be
2 remedied by reducing the requirements with the
3 next crop.

4 As a supplier, a serious error in
5 nutrient placement could mean the loss of a
6 customer, or it could damage your local
7 reputation. This is not a risk that would be
8 taken lightly by anyone who intends to be in the
9 business for the next 25 years. Our business is
10 very much dependent on doing it right and
11 protecting our local reputation.

12 The commercial fertilizer industry has
13 been working hard through the Crop Nutrients
14 Council to help farmers adopt best management
15 practice that encourages responsible crop
16 production, disseminates information on new
17 technologies and techniques, and provides guidance
18 on good environmental stewardship. While this
19 council is only a few years old, it has made some
20 gains and continues to gather acceptance.

21 The Canadian Association of Ag
22 Retailers, of which I am a member, has been an
23 active participant in this council. I would
24 encourage the Clean Environment Commission to
25 involve the Crop Nutrients Council in their

1 deliberations to ensure that all factors are
2 carefully considered before any sector specific
3 recommendations are made. With the growth in the
4 livestock industry, manure management, and the mix
5 between commercial fertilizer and nitrogen
6 byproducts from manure has become a larger area of
7 interest. As the commercial industry continues to
8 drive toward more sophisticated processes in
9 determining nutrient needs, and more site specific
10 land placements of those nutrients, we must be
11 careful to ensure that the same processes are used
12 to determine the nutrient value of manure spread
13 on the land and be equally careful about the
14 placement procedures. The balance between the two
15 sources needs to be maintained to ensure that the
16 livestock industry is able to continue to thrive
17 and that the grains and oil seed industry
18 continues to have access to the nutrient and
19 micronutrient supplies they require.

20 The livestock sector cannot provide
21 all of the required fertilizer. For example, the
22 hog sector can only supply six per cent of what is
23 required. In addition, there may be agronomic
24 reasons why manure cannot be substituted in place
25 of commercial fertilizers in particular instances

1 or for particular crops.

2 Lastly, and this is important, there
3 is always a temptation to make broad assumptions
4 about how problem areas got to be that way, and
5 sometimes a desire to embrace regulation as the
6 most expedient way to resolve it. Often there are
7 more creative ways to resolve issues without
8 damaging the environment, the provincial economy,
9 and the livelihoods of the people involved in the
10 industry.

11 The point is that every action has an
12 equal and opposite reaction. It is important that
13 when this Commission deliberates on their final
14 recommendations, they earnestly evaluate more than
15 just the perceptions and concerns at this point in
16 time. They must also look at the ramifications of
17 any decision on the future realities of Manitoba's
18 environment and the hog industry, and also on the
19 larger agricultural matrix. It must consider what
20 new technology is on the horizon, and whether the
21 needs can be met by fostering rapid adoption of
22 better science or stewardship practices. Any
23 future regulations or recommendations need to be
24 flexible enough to foster a vision of a healthy
25 environment and industry in Manitoba 25 years from

1 now, not just focus on the current perceptions and
2 realities.

3 This not only benefits the
4 agricultural sector, but also all Manitobans. The
5 future standard of living in Manitoba depends on
6 agriculture's ability to continue to provide a
7 healthy economy, and in the end, it is Manitobans
8 who pay for the regulatory environment, both good
9 and bad. We all have a vested interest in doing
10 our best to work together to make prudent
11 decisions. Thank you.

12 THE CHAIRMAN: Thank you,
13 Mr. Steendam. When you talk about this great leap
14 forward in technology, and then you specifically
15 focus on GPS technology, at what point does it
16 become cost effective for a farmer to use that and
17 how big do you have to be to afford that?

18 MR. STEENDAM: Well, there is varying
19 degrees of GPS use. For instance, we can do
20 custom application with a sprayer and use GPS, and
21 it doesn't really involve nearly as much as if you
22 actually go to grid soil testing, which becomes a
23 lot more costly. So there is, you know, if you
24 really want to know what is in the soil, grid
25 sampling is the way to go. But like you say, it

1 costs extra money.

2 THE CHAIRMAN: So, what percentage of
3 farmers nowadays are using some of this high tech
4 stuff?

5 MR. STEENDAM: I would say probably 80
6 per cent, at least 80 per cent of farmers are
7 using some type of GPS technology.

8 THE CHAIRMAN: And that has basically
9 all come in the last five years?

10 MR. STEENDAM: It hasn't come in five
11 years, but it has become prevalent in five years.

12 THE CHAIRMAN: The growth, yes.

13 MR. STEENDAM: I would say probably at
14 least ten years ago I had our first GPS unit.

15 THE CHAIRMAN: Okay. So a lot of it,
16 an individual farmer -- would an individual farmer
17 have his own GPS unit or would he hire custom?

18 MR. STEENDAM: No, they are getting
19 them now.

20 THE CHAIRMAN: I guess on their
21 tractors.

22 MR. STEENDAM: And they are becoming a
23 lot more cost effective. I think 10 or 15 years
24 ago when I bought our first GPS unit, it cost
25 something like, that to outfit our sprayer it cost

1 40,000 bucks. Today you can buy probably a better
2 unit for around 5.

3 THE CHAIRMAN: 5,000?

4 MR. STEENDAM: Yes.

5 THE CHAIRMAN: You talked about there
6 often being more creative ways to resolve issues,
7 you sort of went into it a little bit, but what
8 did you have in mind when you talked about more
9 creative ways to resolve issues?

10 MR. STEENDAM: It is just that if
11 you -- what concerns me is perceptions. As soon
12 as you say that the waterways in our province are
13 contaminated, and the first thing you think of is
14 it has to be the farmer because they have manure.
15 That is the perception, and then immediately, as
16 soon as that hits the newspaper, that becomes
17 reality. And I think we have to be a little
18 broader minded than that and see what else is
19 causing the problem. That is what I had in mind.
20 And if there is ways to use up, you know, some of
21 that water or change the way we do things a little
22 bit.

23 THE CHAIRMAN: Thank you. Edwin?

24 MR. YEE: Yes, Mr. Steendam, you
25 mentioned the balance between the two sources of

1 fertilizer, chemical fertilizers and the use of
2 manure as a fertilizer. With the new phosphorous
3 amendments in the regulations, and knowing that
4 there is a different ratio or content of nitrogen
5 phosphorous in manure, do you see this playing a
6 more important role in the future in terms of this
7 combination of using chemical and manure
8 fertilizers?

9 MR. STEENDAM: I can see it becoming a
10 more important role for us as suppliers of
11 fertilizer, because again it will become more
12 important to do a better job in interpreting the
13 soil test and knowing exactly how much has to go
14 on for top up.

15 MR. YEE: Do you feel that the level
16 of testing right now is sufficient or is there a
17 need to increase the level of soil testing?

18 MR. STEENDAM: When I started in the
19 fertilizer business, the odd person did a soil
20 test. Like when I say that, and then it was kind
21 of like, well, we will see what is in there, that
22 kind of thing. But it really wasn't looked at
23 very seriously. Like, you know, Joe Farmer, you
24 know, I know what I'm going to put on that crop
25 because I know what it takes. Do you know what

1 I'm saying? So there was a little bit of soil
2 testing happening. Today there is a lot of soil
3 testing happening. I would say that 95 per cent
4 of our customers soil test every year. So I think
5 that has gone -- or drastically improved. I think
6 there will be a move toward more grid testing.
7 Like so if there is an improvement, I can see it
8 going that way.

9 MR. YEE: Thank you.

10 MR. MOTHERAL: Yes, Mr. Steendam, I
11 still have connections with the farm and I'm
12 probably, I belong to that 20 per cent that don't
13 have GPS, I still drive crooked.

14 MR. STEENDAM: It looks so nice when
15 you drive straight, though.

16 MR. MOTHERAL: I know, and I am just
17 wondering, when you said 80 per cent, I think
18 probably what you meant is 80 per cent of the
19 farmland was being farmed with GPS, because I
20 would imagine still the majority of the farmers do
21 not have it as far as the number of farmers. Is
22 that fair enough?

23 MR. STEENDAM: I can live with that.

24 MR. MOTHERAL: I'm interested in the
25 Crop Nutrients Council. You have asked that

1 possibly this association, maybe contact them in
2 further research or whatever. Who else -- you
3 cited the Agriculture Retailers Association as
4 being a member -- who else would be members? Like
5 are there farm organizations, et cetera?

6 MR. STEENDAM: Yes. I actually
7 brought a little information on it just in case
8 you asked that question. Can I just -- do you
9 want me to read off some of these?

10 MR. MOTHERAL: Some of the major ones.
11 Obviously there is quite a few.

12 MR. STEENDAM: There is. The AAFC
13 Environment Bureau, Agricore United, Agricultural
14 Institute of Canada, Agrium Inc., Atlantic
15 Fertilizer Institute, Canadian Association of Ag
16 Retailers, Canadian Cattlemen's Association,
17 Canadian Federation of Agriculture, Canadian
18 Fertilizer Institute, Canadian Pork Council,
19 Canadian Seed Growers Association, Canola Council
20 of Canada, Cargill Limited, Certified Crop
21 Advisor.

22 MR. MOTHERAL: That is fine.

23 MR. STEENDAM: It is pretty far
24 reaching. It involves a lot of the input people
25 into agriculture, so it is, I think it is very--

1 MR. MOTHERAL: I think that is all I
2 have right now.

3 THE CHAIRMAN: It is a national body
4 obviously?

5 MR. STEENDAM: Yes.

6 THE CHAIRMAN: Where is it based?

7 MR. STEENDAM: You have got me. I
8 think it is in Winnipeg.

9 THE CHAIRMAN: We can certainly find
10 that out.

11 MR. STEENDAM: You can have this.

12 THE CHAIRMAN: Thank you very much,
13 Mr. Steendam, for your presentation today.

14 MR. STEENDAM: Thank you for your
15 time.

16 THE CHAIRMAN: John van Aert, would
17 you please introduce yourself for the record?

18 MR. VAN AERT: I am John van Aert.
19 JOHN VAN AERT, having first been sworn, presented
20 as follows:

21 MR. VAN AERT: Good afternoon
22 committee members of the Clean Environment
23 Commission. I have a couple of comments about
24 what I do on my farm.

25 My name is John van Aert and I farm

1 along with my brother Joe and father George, and
2 our families, along with four employees in the
3 East Selkirk area. Our farm consists of 3500
4 acres of annual cropland and an 800 sow operation.
5 We market 75 per cent of our hog production as
6 50-pound weanlings and 25 per cent are marketed at
7 slaughter weight.

8 My father started the farm in 1964
9 purchasing 127 acres. He quickly added a hog
10 operation to add cash flow to the farm. He
11 continued to expand the hog operation, adding
12 concrete manure pits and a liquid manure handling
13 system to simplify waste management and better
14 utilize nutrients in manure for crop production.
15 He was one of the first producers in the area to
16 directly inject manure into the soil using a
17 manure wagon and a tool bar.

18 My brother and myself started farming
19 in the 1980s, and in 1990 started the development
20 of a new hog farm site to expand our sow herd to
21 support three families. We worked with our local
22 rural municipality and planning district to site
23 these barns in the proper location. Over the next
24 16 years these are some of the things that we have
25 done to make our hog farm environmentally

1 sustainable.

2 In 1997 we constructed a 400 day
3 storage earth and manure structure to eliminate
4 any winter spreading. Shelter belts are planted
5 around the earthen manure structures to reduce and
6 deflect winds from over the surface.

7 We were also involved with an
8 experimental project developing a negative air
9 pressure cover to help reduce odours. The cover
10 has proved to be very effective. We file our
11 manure management plans annually, testing the
12 manure and soil to maximize the efficient use of
13 the nutrients in the manure. We apply manure by
14 direct injection by custom applicators every fall
15 to different fields, rotating our manure
16 application to each field a minimum of once every
17 three years. This takes advantage of the various
18 nutrients and organic matter of the manure as it
19 breaks down. The phytase enzyme is added to all
20 of our rations to reduce phosphorous use in the
21 feed, thus reducing phosphorous nutrient excretion
22 in the manure. Studies have shown that phytase
23 can reduce phosphorous excretion by 25 to 40 per
24 cent. There are other advantages in feeding
25 management, such as better balancing amino acid

1 levels and rations to reduce the inclusion of
2 crude protein in order to lower nitrogen
3 excretion.

4 Maintaining the wells on our farm is
5 also very important. We make sure that water
6 cannot pond near the well casing and the well caps
7 are properly sealed. Water tests are done
8 annually to monitor water quality. One of our
9 wells that feeds our barn also feeds my house, so
10 water quality is very important for my family as
11 well as the livestock.

12 I believe the hog industry is already
13 highly regulated and environmentally sustainable.
14 There are several regulations in place such as the
15 Livestock Manure and Mortalities Management
16 Regulations, Environment Act, Planning Act, et
17 cetera, that we follow, and I believe that my farm
18 meets or exceeds the current Manitoba regulations.
19 We are doing our part in regards to nutrient
20 management. It is important for a hog operation,
21 or any farm for that matter, to expand or upgrade
22 their facilities to remain viable, and in my case,
23 give my children an opportunity to continue hog
24 farming into the future. Thank you.

25 THE CHAIRMAN: Thank you. Edwin?

1 MR. YEE: Mr. van Aert, just one
2 question in terms of future regulations, should
3 there be additional future regulatory
4 requirements, do you see that impacting your
5 operation?

6 MR. VAN AERT: We always kept up with
7 the regulations as they came forward and
8 sometimes, like our lagoon cover, it was a
9 prototype at the time that we felt that it was a
10 good thing to do and a neighborly thing to do
11 that, yes, it would be, we would keep up with the
12 regulations.

13 MR. YEE: This cover, does it
14 significantly reduce the odours as well?

15 MR. VAN AERT: Yes, it does.

16 MR. YEE: Do you know if it is being
17 employed by any other operators?

18 MR. VAN AERT: The Department of
19 Agriculture had tours at our farm over the last
20 several years, and there are some hog farms that
21 are in more highly populated areas that have
22 installed that cover.

23 MR. YEE: Thank you.

24 MR. MOTHERAL: Yes, Mr. Van Aert, this
25 is a personal question, but have you had any

1 complaints about your hog operation?

2 MR. VAN AERT: No. When we started
3 our new site in 1988, I built a little house on
4 the site first. And before I started that site, I
5 went to all of the neighboring property owners and
6 to the rural municipality that that was a good
7 site to eventually start a hog operation on.

8 MR. MOTHERAL: And on your operation
9 you say 25 per cent, you finish 25 per cent of
10 your hogs?

11 MR. VAN AERT: Yes.

12 MR. MOTHERAL: The other 75 per cent
13 go to feeder market. Do those go, again, are
14 those locally or do they have to be transported
15 far?

16 MR. VAN AERT: Right now we are
17 exporting our pigs, our 50 pound pigs.

18 MR. MOTHERAL: You are exporting, they
19 are going to North Dakota or --

20 MR. VAN AERT: Yes, Minnesota.

21 MR. MOTHERAL: That is all I have,
22 thanks.

23 THE CHAIRMAN: Thank you very much
24 Mr. van Aert, thank you for coming here today.

25 That brings us to the end of the list

1 of people who have indicated that they wish to
2 make a presentation. If anybody else in the
3 audience wishes to make a presentation at this
4 time, you are welcome to do so. If not, we will
5 adjourn. We will be here until 5:00 five o'clock,
6 which is the time that we indicated we would take
7 a supper break. We will be back here after
8 supper, although nobody has indicated that they
9 wish to make a presentation this evening, we will
10 come back here and be here for a short time to
11 accommodate any walk-ins. So I thank you for
12 coming out here this afternoon. We are adjourned.

13 (PROCEEDINGS RECESSED AT 4:30 AND
14 RECONVENED AT 7:00 P.M.)

15 THE CHAIRMAN: Good evening, you wish
16 to make a presentation, or one of you?

17 MR. WRUCK: Yes, I probably should.

18 THE CHAIRMAN: Take a chair up at this
19 table, please. Could you introduce yourselves for
20 the record, please?

21 MR. WRUCK: I'm Gus Wruck, I'm
22 presently a Councillor for the RM of Lac du
23 Bonnet. That is G-U-S, W-R-U-C-K.

24 MR. BRUNEAU: I'm Bob Bruneau, a
25 Councillor in the RM of Lac du Bonnet.

1 THE CHAIRMAN: We will ask you to take
2 an oath promising to tell the truth.

3 GUS WRUCK AND BOB BRUNEAU, having been sworn,
4 presented as follows:

5 THE CHAIRMAN: Go ahead.

6 MR. WRUCK: I should give you a little
7 bit of my background first of all. I retired from
8 Manitoba Agriculture in August, and during my
9 career with Manitoba Agriculture I was a swine
10 specialist, as well as an administrator of the
11 Animal Care Act. I'm a veterinarian by training.
12 I have been in veterinarian practice in Lac du
13 Bonnet, as well as in Selkirk, dating back to the
14 1970s. So I have a little bit of experience in
15 livestock and animal production. And obviously,
16 as you might guess, my support is for the swine
17 industry, irregardless of what else has been said.

18 Since my election to council of the RM
19 of Lac du Bonnet, I have taken a considerable
20 interest in the water, the water situation and
21 what is going on. One of the first things that
22 stood out to me very clearly is the great interest
23 from the general public with respect to livestock
24 and livestock handling, and particularly with
25 particular focus on the hog industry. And it is

1 well known that the hog industry has already got
2 quite a few regulations to it. But we don't seem
3 to be taking near enough attention and focusing it
4 on some of the other sources of contamination.

5 I'm quite aware that you are probably
6 aware of the Lake Winnipeg Water Stewardship
7 Board's report to government back in December, and
8 I think there is a fair bit of information in that
9 to recommend and focus on, and particularly
10 recommendation, or the series of recommendations
11 under item 24 which talk about septic field
12 maintenance and alternatives to septic fields.

13 In the RM of Lac du Bonnet, we have a
14 portion of Lac du Bonnet that is limited in terms
15 of drainage that goes through it, and that is the
16 Pinawa Bay area of that lake. And Pinawa Bay,
17 towards the end of the summer, gets extremely
18 green and it is entirely due to, we believe,
19 leaching from the numerous cottage septic fields
20 that are surrounding the lake, and many of the
21 septic fields are old or purposely maligned to
22 drain their effluent straight into the water. And
23 it galls me to know that this is happening, and up
24 to this point very little has been done about it.
25 It is an issue that I think cannot ever be blamed

1 on livestock or any other species of animals.

2 It is my understanding, based on this
3 report, that the main emphasis is phosphorous.

4 And even in the report it is suggested that only
5 about 15 per cent of the phosphorous loading is
6 coming from agriculture. And that would include
7 all of the phosphorous that is added as
8 fertilizer, from cattle, as well as from pigs.
9 But to single out pigs as the major source is a
10 little bit illogical to do that.

11 In addition, another 17 per cent comes
12 from undefined sources, and of course undefined
13 sources also includes those septic fields that I
14 mentioned just now. And we know where there is
15 considerable problems with those septic fields and
16 we think it will probably be remiss not to start
17 focusing on these. As I said, the recommendations
18 in this report provide plenty of activities that
19 can be done in terms of correcting some of these
20 problems. I think, Bob, that concludes my
21 concerns and what I had to say.

22 THE CHAIRMAN: Bob, do you have
23 anything to add?

24 MR. BRUNEAU: I just want to add that,
25 you know, since I got on the council over eight

1 years ago they spoke about riparian areas and
2 keeping cattle and animals of grazing on river
3 banks. And you go anywhere off the major
4 highways, off 44, 11, you know, wherever there is
5 a farm, you see many, many cattle right in the
6 creek bed --

7 MR. WRUCK: Even on the way down
8 tonight.

9 MR. BRUNEAU: -- right in the creek
10 bed with the manure pile there. What happens to
11 that in the springtime when that all runs back
12 into these creeks and into the river? Why isn't
13 something done that is obvious? You get a hog
14 operation that is five miles away from any river
15 or stream, I don't think they do as much pollution
16 into the river as a manure pile right on the river
17 bank. So I think, you know, if they want to get
18 serious about keeping the manure out of the water,
19 they can start by what is obvious.

20 MR. WRUCK: I guess to sum up, at
21 least from my perspective and I think from the RM
22 of Lac du Bonnet's perspective, is the
23 recommendations about everything that really has
24 to be done are in here. We have already got
25 manure management plans for livestock producers

1 with the idea of not putting on any more
2 phosphorous or nitrogen than is going to be taken
3 off by the crops. We have to make it work.

4 As a concluding remark, three years
5 ago I visited a swine producer in Holland,
6 southern Holland in a little village called
7 Mariahout. And if you understand Holland and how
8 they raise pigs, you understand that we really
9 don't have a problem. In Holland they raise as
10 many pigs as all of Canada, and they fit into an
11 area about the size of our Interlake. To raise
12 pigs in Holland you have to buy a manure quota,
13 and that allows you so much manure to be produced.
14 All of the manure is picked up and hauled away by
15 commercial haulers to manure processing plants,
16 and this is processed very much like human sewage
17 in terms of removing the water and using the end
18 product for fertilizer in Holland or other
19 countries in Europe. So if you look on any map of
20 Holland, you will see that the swine operations
21 are very, very close together with other livestock
22 operations. They are able to make it work. Why
23 can't we? So that is basically my comments.

24 MR. BRUNEAU: In our municipality we
25 have 300 animal units, and anything over that is

1 conditional use, so we put the conditions on. And
2 we like them to follow the regulations of the
3 government too.

4 THE CHAIRMAN: Have you added stricter
5 requirements in your conditions, stricter than the
6 Provincial regulations?

7 MR. BRUNEAU: No.

8 MR. WRUCK: I think it is important to
9 understand that Lac du Bonnet municipality is
10 right on the interface, if you will, between
11 agriculture and the Laurentian shield, so we have
12 two sets of criteria that we have to apply, one
13 for the agricultural area and one for the
14 Laurentian shield.

15 MR. YEE: I guess the only question I
16 would ask, are there a number of hog operations in
17 the municipality of Lac du Bonnet?

18 MR. WRUCK: Yes, there is. In fact, I
19 had the privilege of speaking at a hearing for an
20 application for a hog producer the night before
21 the election. I was speaking as a private citizen
22 and, of course, I was pretty much in support of
23 it. And I knew it was going to cost me a few
24 votes, but I can't care. We do have a major
25 Hutterite Colony, Brightstone Colony, that is in

1 our municipality as well that produces pigs.

2 MR. YEE: Has the municipal council
3 received a large number of complaints about the
4 hog operation in the municipality?

5 MR. BRUNEAU: We received complaints
6 when this fellow applied for this conditional use
7 last fall. Then we had a place full of people
8 from different, other municipalities, bordering
9 municipalities who were against it.

10 MR. YEE: Thank you.

11 THE CHAIRMAN: That was for a hog
12 operation?

13 MR. WRUCK: Yes, Graham Reid was the
14 name.

15 THE CHAIRMAN: Wayne?

16 MR. MOTHERAL: I don't think so, I
17 think the couple of questions I was going to ask,
18 you asked already. The fact that you seem to be
19 pleased with the municipality's ability to put
20 your own conditions on, and that you feel is
21 probably an asset to the municipality and you have
22 that right to do that.

23 MR. BRUNEAU: The only condition that
24 we have in our zoning that is a little more rigid
25 than agriculture, we want to keep animals half a

1 mile away from our main river. We have the two
2 rivers, the Lee River and the Winnipeg River.

3 MR. MOTHERAL: Is your municipality a
4 contributor-- sorry, that was Reynolds and
5 Whitemouth Soil and Water Association, I guess it
6 was called the Whitemouth Soil and Water
7 Association. Do you have any local organizations
8 like that in your municipality?

9 MR. WRUCK: We are a member of
10 Northeast Agassiz Water Management Association, as
11 well as the north chapter of the Red River Valley,
12 Red River Basin I guess it is.

13 MR. MOTHERAL: And that includes --
14 how many municipalities would that include? Quite
15 a few?

16 MR. WRUCK: All of the ones in the
17 northeast for the Northeast Agassiz, right from
18 Springfield to Alexander.

19 MR. MOTHERAL: You don't have the
20 pleasure of having conservation districts there
21 yet, do you?

22 MR. WRUCK: No. Do we want one?

23 MR. MOTHERAL: Well, I guess I should
24 reword that. We belong to one and it has been
25 very beneficial. I shouldn't say that it would be

1 for you, but there is a lot of soil and water
2 associations work the same way as they do anyway.

3 MR. WRUCK: Are they going to have an
4 influence on our resident cottage owners that are
5 leaking all of their stuff into the river?

6 MR. MOTHERAL: I'm not going to answer
7 that, I don't know that. That would be up to the
8 association when it is formed, you put in a
9 mandate of what you want to do.

10 MR. WRUCK: Because that is probably
11 one of the biggest areas that we would have
12 concern about is the leakage from these inadequate
13 septic systems.

14 MR. MOTHERAL: We have been made aware
15 of that in other areas of Manitoba too. So that
16 is all I have.

17 THE CHAIRMAN: Thank you, gentlemen,
18 thank you for coming out this evening. Is there
19 anybody else, any of you gentlemen want to make a
20 presentation this evening? No.

21 We will wait a few more minutes, but
22 it doesn't appear that we are going to get -- we
23 had a full afternoon, but it doesn't appear like
24 the evening is going to be the same. Okay. We
25 are going to finish now.

1 (Proceedings concluded at 7:16 p.m.)
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CERTIFICATE

I, CECELIA REID, a duly appointed Official
Examiner 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.

Cecelia Reid

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