MANITOBA CLEAN ENVIRONMENT COMMISSION

HOG PRODUCTION INDUSTRY REVIEW

TRANSCRIPT OF PROCEEDINGS

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Held at the Delta Hotel

Winnipeg, Manitoba

MONDAY, MARCH 5, 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 Monday, March 5, 2007
2 Upon commencing at 1:02 p.m.
3 THE CHAIRMAN: Good afternoon, ladies
4 and gentlemen. I'd like to call these proceedings
5 to order. My name is Terry Sargeant. I'm the
6 Chair of the Clean Environment Commission. I'm
7 also the Chair of this panel. With me on the
8 panel for these hearings are Edwin Yee and Wayne
9 Motheral.
10 I have a few opening comments to make.
11 The Clean Environment Commission has been
12 requested by the Minister of Conservation to
13 conduct an investigation into the environmental
14 sustainability of the hog industry in Manitoba.
15 The Terms of Reference from the Minister direct us
16 to review the current environmental protection
17 measures in place relating to hog production in
18 Manitoba in order to determine their effectiveness
19 for the purpose of managing the industry in an
20 environmentally sustainable manner.
21 Our investigation is to include a
22 public component to gain advice and feedback from
23 Manitobans. This will be by means of public
24 meetings in the various regions of Manitoba to
25 ensure broad participation from the general public

1 and affected stakeholders.
2 We have been asked to take into
3 account efforts under way in other jurisdictions
4 to manage hog production in a sustainable manner.
5 Further, we are to review the contents of the
6 report prepared by Manitoba Conservation entitled
7 "An Examination of the Environmental
8 Sustainability of the Hog Industry in Manitoba."
9 And at the end of our investigation, we will
10 consider various options and make recommendations
11 in a report to the Minister on any improvements
12 that may be necessary to provide for the
13 environmental sustainability of this industry.
14 To ensure that our review includes
15 issues of importance to all Manitobans, the panel
16 has undertaken to hold 17 days of meetings in 14
17 communities throughout agri-Manitoba. These
18 meetings are commencing today and will continue
19 through March and April with the final public
20 meeting currently scheduled for Winnipeg on
21 April 27th. It is open to any groups or
22 individuals to make a presentation to this panel
23 on issues related to hog production in the
24 province.
25 For the most part, presentations are

1 to be limited to 15 minutes. Exceptions may be
2 made in cases where a presenter needs more time
3 but this must be arranged with the Commission
4 secretary prior to the presentation.
5 Those making presentations to the
6 panel will be required to take an oath promising
7 to tell the truth to the panel. Presentations
8 should be relevant to the mandate given the
9 Commission by the Minister and to the issues
10 described in the Guide to Public Participation in
11 this review which is posted on our website. If a
12 presentation is clearly not relevant, I will rule
13 it out of order. It is also open to me to rule
14 out of order presentations that are clearly
15 repetitive.
16 Members of this panel may ask
17 questions of any presenter during or after the
18 presentation. There will be no opportunity for
19 other presenters to question or cross-examine
20 presenters.
21 Today will differ from the norm. Both
22 the Manitoba Pork Council and the Coalition of
23 Environmental Groups will make opening
24 presentations of approximately two hours each. At
25 the final hearing, both of these parties will be

1 given an extended period, likely about one hour,
2 to make closing comments.
3 In addition to the public meetings,
4 the CEC is engaging consultants to assist us in
5 this review. The results of these research
6 endeavours will be posted on our website upon
7 receipt. For the most part, that will be in late
8 June. Parties will be invited to provide written
9 comment on any of these reports if they so wish.
10 A reasonable, albeit brief, period of time will be
11 allowed for this. Written submissions will also
12 be accepted. Information as to how to submit
13 written suggestions is available on our website.
14 The deadline for receipt of such written
15 submissions is May 7th.
16 We also realize that many people are
17 reluctant to make presentations in public for a
18 variety of reasons. To that end, we have engaged
19 a graduate student from the University of Manitoba
20 to meet with or talk on the phone with people who
21 would rather not speak at public meetings. These
22 meetings will be kept in confidence. Information
23 as to how to contact this person is available on
24 our website as well as at the table at the back of
25 the room.

1 Some administrative matters. If you
2 wish to make a presentation today or at any of our
3 other meetings over the next six or seven weeks,
4 you may register today at the table at the back of
5 the room.
6 As is our normal practice, we are
7 recording these sessions. Verbatim transcripts
8 will be available on line in a day or so. You can
9 link to these transcripts from our website.
10 And finally, in respect of cell
11 phones, I would ask that they be turned off or the
12 ring tone turned off. And if you must take a
13 call, please leave the room. I am not terribly
14 tolerant about cell phones going off in the middle
15 of hearings. It's discourteous to the presenters.
16 We have a special shredding machine for cell
17 phones and I will confiscate them and throw them
18 in, if any of them go off.
19 That's all I have to say by way of
20 opening. I would now invite the Manitoba Pork
21 Council. First, before we proceed, I would like
22 each of you to introduce yourselves for the record
23 and then I'll ask our secretary, Cathy Johnson, to
24 administer the oath to tell the truth.
25 MR. MAH: For the record, Peter Mah,

1 Manitoba Pork Council.
2 MR. KYNOCH: I am Karl Kynoch, the
3 Chairman of the Manitoba Pork Council.
4 MR. DICKSON: I'm Andrew Dickson. I'm
5 the General Manager for the Manitoba Pork Council.
6 MS. BRYKSA: And I'm Tracey Bryksa,
7 Manager Public Affairs and Marketing for the Pork
8 Council.
9
10 PETER MAH: Sworn
11 KARL KYNOCH: Sworn
12 ANDREW DICKSON: Sworn
13 TRACEY BRYKSA: Sworn
14 KARL KYNOCH, Chairman of Manitoba Pork Council:
15 MR. KYNOCH: Thank you. I will just
16 give a brief overview who we are and then we'll
17 get into some of the technical stuff.
18 Manitoba Pork Council is a membership
19 association of all the hog producers of Manitoba.
20 We represent approximately 1,400 hog producers in
21 the province. We were created by government and
22 are funded by a mandatory check off. That in
23 itself points out that we speak on behalf of all
24 the producers in this province.
25 Our mission is to foster the

1 sustainability and prosperity of the pork industry
2 for the good of all hog farmers and all
3 Manitobans. I feel we've done a very good job of
4 that in the past and we will continue to do so in
5 the future. Our Board of Directors is made up
6 from 14 elected members. We have eight
7 geographical districts across the province and we
8 also have five production districts and one
9 weanling district. As you can see, we have a good
10 cross-representation on our board.
11 We have subcommittees that oversee the
12 activities, an Executive, Research & Environment
13 Committee, Public Affairs Committee, Quality
14 Assurance and Food Safety, and a Traceability
15 Committee. Manitoba hog farmers have invested
16 over $20 million in new technology and independent
17 environmental research over the past years. Over
18 the next eight weeks, we will show what we already
19 know to date is that we are good stewards of the
20 land in the past and we will continue to be in the
21 future, and that the hog industry is sustainable
22 for Manitoba.
23 With that, I would like to introduce
24 Andrew Dickson, my General Manager, Peter Mah who
25 is the Director of Community Relations and

1 Sustainable Development. Tracey is our General
2 Manager of Public Affairs. She's here to help
3 with technical support. Peter and Andrew will be
4 giving the overview of the technical information
5 of the hog industry. So with that, I will hand it
6 over to Andrew.
7 ANDREW DICKSON, General Manager of Manitoba Pork
8 Council:
9 MR. DICKSON: Thank you,
10 Commissioners. I'm going to work our way through
11 the ring binder that we gave to you and there's
12 various sections in it and I'm going to highlight
13 some of the various points in the section. And to
14 aid this, we're also having a Power Point
15 presentation of some of the highlights as well to
16 reinforce the points we're going to try and make.
17 What we tried to do here is respond to
18 the issues that you asked the public to respond to
19 as a result of your scoping hearings. And there's
20 about 15 sections that we'd like to try and cover
21 quickly in the next hour and a half or so and then
22 hear questions. Now, I don't know how you want to
23 handle questions. Do you want to do it as we go
24 along or do you want to do it towards the end?
25 THE CHAIRMAN: I think we'll probably

1 do it both. If you raise issues that clearly we
2 need further information on, we'll interrupt you,
3 if you don't mind, otherwise we'll save questions
4 until the end.
5 MR. DICKSON: Some of the responses
6 are interwoven into the different sections. We'll
7 deal with something on soil quality as
8 implications for nutrient management and so forth.
9 Now as an opening, I was encouraged to
10 provide a description of the industry as it
11 currently stands so people who aren't familiar
12 with hog production have some idea of the
13 terminology and the words that are used within the
14 industry.
15 So the opening section is called The
16 Production System. And essentially here what I'm
17 trying to describe is modern hog barns are complex
18 systems. They require a high level of husbandry
19 and management skills. And combining that with
20 the latest in technology and good genetics, hog
21 producers in Manitoba rank amongst the top
22 producers in the world for productivity and
23 quality of finished animals. We copy a lot of
24 stuff from across the world and have improved upon
25 it and we are a model of production for many

1 places.
2 Back in the 1950's, a lot of farms
3 were mixed farms. They grew a little bit of
4 everything. That's changed over the years. When
5 you raise pigs outdoors, we had a few pigs per
6 farm, productivity was low. Sows would crush
7 their piglets. It wasn't a comfortable life for
8 the bigger pigs. There was frostbite, hairless
9 ears, insect bites, sunburn and so on.
10 Over the years, we adopted some new
11 technologies, one is the controlled environment
12 house. And in the last 20 years, hog farming has
13 become more specialized. The average farm now has
14 about 500 sows. These pigs are now raised through
15 different stages in different barns according to
16 where they are at. So in other words, for a
17 pregnant sow, you keep them in a gestation barn or
18 part of a barn called the gestation area. That
19 sow will then deliver piglets in a farrowing room.
20 That room will have supplemental heat and a floor
21 surface and so on. And the piglets are then
22 raised in the nursery barn. And then once they
23 reach a certain weight, which is around about
24 27 kilos, they are moved to a feeder barn where
25 they are raised to a market weight of about 113

1 kilograms or 248 pounds. So there's the various
2 types of barns.
3 And some operations, they are called
4 "farrow to finish" where they have all these
5 different barns all on one site.
6 These pigs today are raised with fewer
7 diseases than years ago. They have biosecurity
8 programs in place. The barns are sheltered. The
9 environment is computer controlled. Water is
10 treated and tested and so forth. These are
11 high-health farms.
12 In the next sections, I put in a long
13 description in here about the breeding barn, like
14 gilts, how they give birth, how they are looked
15 after, the various management techniques.
16 Then we move over to gestation barns.
17 In those, you'll have two types of systems.
18 You'll have these individual stall systems which
19 have been developed based on recommendations from
20 30 years ago from the veterinarians as to how to
21 look after these animals. And there's been some
22 improvements in the new system called Loose
23 Housing Systems. And some of the industry is
24 looking at adopting those for gestation barns.
25 And then we move over from gestation

1 over into farrowing barns where the animals
2 actually give birth. And these are quite complex
3 systems in terms of how the sow is looked after,
4 the piglets are protected and fed and so on.
5 I put in some discussion about piglet
6 care and the various husbandry procedures that
7 they go through with them.
8 And then when we move over to the
9 grower-finisher barn, these are feeder pigs.
10 These are well-ventilated. The pigs are kept
11 clean. They have a dry area to lie in so they can
12 rest and eat. And the manure is removed from the
13 production system. And then after they reach
14 their finished weight, they are then transported
15 at roundabout 248 pounds or 113 kilograms in
16 specially designed trucks to ensure they safely
17 arrive at the packing plants.
18 In terms of the hog industry, in terms
19 of some statistics, I have provided a whole
20 variety of stats here. And the numbers have
21 increased considerably in the last 20, 30 years.
22 And I've got a chart I've put up here to show the
23 complexity of the hog industry. I'm not going to
24 go through each of the different sections. But
25 just to illustrate the significance of the

1 industry in terms of capital costs, they spend
2 $450 million a year, for example, on feed. We use
3 1 million metric tonnes of barley each year for
4 feeding the animals plus other parts of their
5 ration. We import breeding stock and so forth.
6 Total pig production, you know, this
7 is in 2005, it's about almost 9 million head worth
8 a billion dollars in production. And then we show
9 how it's sold. Export to the United States, go
10 through the slaughtering plants, the capacity and
11 so forth.
12 A key change occurred in 1995 with the
13 change in the Crow's Nest Pass grain subsidy.
14 That was a series of changes under way and that
15 added to the pressure to change in the hog
16 industry. And we move to an open market system
17 and new hog slaughtering facilities were built to
18 meet both the demand for -- in the United States,
19 we saw an increased demand for feeder pigs and
20 weanlings out of the U.S. Corn Belt. In this
21 period, from the mid 1990s to the early 2000s,
22 growth approximately was about 12.6 per cent per
23 year. That contrasted with the previous decade of
24 about 4.6. And since about 2004, 2003, it's
25 actually slowed down. We're running now about 2

1 per cent as an annual growth rate for the
2 industry. That's a key point we want to make.
3 This word exponential keeps getting used all the
4 time.
5 I provided some information here on
6 the number of pig farms, the type and location,
7 how many commercial operations we have and the
8 percentage that produce weanling pigs and so
9 forth. And some of these are based on census
10 figures and some are from information that we
11 gathered because of our ability to collect a levy.
12 Just a key point I want to make is
13 that 51 per cent of the total number of operations
14 has sows. In other words, half the operations had
15 sows, the other half are feeder barns. And these
16 operations are of various sizes but about 27
17 barns -- sorry, I should take that back, 75
18 production units have more than a thousand sows
19 per unit. And when you go over to the finisher
20 side, the barns are smaller but they account for
21 half the barns in the province.
22 And in terms of farm location, we have
23 a graph here that shows the various numbers
24 located by agricultural region in the province.
25 And as you can see, like region 9, for example,

1 has more than most of the other regions in the
2 province. And we have a map that we'll put up to
3 show distribution. And you can see a significant
4 proportion of the industry is located in the
5 eastern part of the province.
6 One of the questions that comes back
7 all the time is about pig densities, and we
8 provided some information here.
9 Manitoba pig producers export 43 per
10 cent of all their pigs, but these are the little
11 pigs that we export. We ship a lot of little
12 pigs. When you take those into size and the
13 amount of land that we have, Manitoba's pig
14 density is about 40 per cent less if you use
15 these, rather than just looking at numbers. You
16 look at actual weight, it's a different matter
17 altogether.
18 In terms of pig inventory, one of the
19 issues that keeps coming up from the media is that
20 we have 9 million pigs on the farm. Well, we
21 don't. At any one time, we might have in the
22 province, according to statistics here,
23 2.96 million head as of January 1, 2007. Our core
24 herd is the sows. It's about 378,000 sows on the
25 farm. And from those, that forms the basis by

1 which we produce weanlings or finisher pigs.
2 At any one time, one million of these
3 are newborn or weanling pigs weighing less than 20
4 kilograms. This is a significant number to use
5 because of the potential impact on the
6 environment.
7 Another three-quarters of a million of
8 these pigs at any one time weigh between 20 and
9 60-kilograms. And then of course in the finisher
10 category, we have about three-quarters of a
11 million.
12 Moving on pretty quickly here. I have
13 provided some graphs on pig production and how we
14 compare with the rest of Canada. I took the value
15 of production and compared to various other crops
16 and so on. As you can see, hogs are a major
17 sector in terms of the whole total value of farm
18 production in the province.
19 In terms of pig marketings, in 1967,
20 Manitoba hog producers were organized into a Hog
21 Marketing Board. And then July 1, 1996, the
22 marketing authority was taken away and producers
23 had the option of marketing in an open market
24 either to brokers or directly to processing
25 plants.

1 I put in some statistics here on the
2 exports and various sale types and so on. And you
3 can see that most of our production gets sold down
4 to the United States. 3.8 million hogs are killed
5 in Manitoba provincial plants. But we ship
6 3.8 million weanlings directly into the United
7 States. And we actually ship 1.3 million
8 slaughter animals into the United States into
9 their smaller plants.
10 In terms of farm cash receipts, the
11 swine industry is the largest source of cash
12 receipts in terms of providing some information
13 here on feed use. And you can see that we buy
14 $450 million worth of feed in 2005. And that's
15 total feed in terms of grain and the various
16 protein supplements and so on.
17 If we were ever to increase our
18 numbers by finishing all the weanlings in the
19 province instead of exporting them, then our
20 consumption would move to 3.3 million tonnes.
21 In terms of hog slaughtering in the
22 pork processing industry, I provided some
23 information here in terms of the context and in
24 terms of the food and beverage processing
25 industry, that sector is worth $3.3 billion to the

1 provincial economy. And in that, $1.1 billion is
2 meat and meat products, and it is mostly hogs.
3 It's 90 per cent mostly hogs. And as you can see,
4 we export to Japan, the United States, Mexico,
5 Australia, and 28 other countries.
6 I put in some description here about
7 the history of our meat processing plants.
8 Essentially, we have a plant in Brandon, we still
9 have slaughtering and processing plants here in
10 Winnipeg, and a slaughter and processing plant in
11 Neepawa. And there's various numbers here. It
12 should be noted that the Brandon plant is in a
13 period of expansion and they hope to get up to 4,
14 4.5 million pigs after their expansion in terms of
15 handling slaughter. Some rationalization of their
16 plants in Winnipeg.
17 In terms of background here in terms
18 of the hog slaughter until the early 2000s.
19 Essentially, Manitoba pig operations can produce
20 more than enough pigs for slaughter in the
21 province if all our plants were at full capacity,
22 but 58 per cent of these pigs are being shipped to
23 the United States and other provinces.
24 I put in a section in here on trade.
25 A little bit of a description in terms of how

1 Manitoba fits into the Canadian situation. The
2 key thing here is we're very dependent upon
3 exchange rates, and you'll see this when we get
4 into other parts of the presentation. The
5 Canadian dollar plays a major factor, the value
6 compared to the United States dollar in terms of
7 how our industry performs. And I put some
8 information in there on that.
9 We've actually dropped down in terms
10 of being an exporter of pork. The larger
11 provinces are Quebec, Ontario and Alberta by
12 percentages.
13 I put a section in here on prices and
14 returns to give you an idea of what the
15 sustainability of this industry is from an
16 economic perspective. That's why a lot of these
17 statistics are in here because of the three parts
18 to developing a sustainable industry.
19 Weanling pigs are a challenge. And
20 currently, it's very attractive to send them into
21 the United States and it's been a good market for
22 our hog producers here. In the long run, we would
23 like to see more of these finished here in
24 Manitoba if we can get the right combination of
25 prices and exchange rates.

1 Feeding costs will also be a major
2 determinant on how much feeding we do in the
3 province. And the imposition of government
4 regulations and so on, if they are not handled
5 right, we'll have a significant impact in terms of
6 our net returns as well.
7 In terms of change and stuff like
8 this, as we see with changes in feeder prices and
9 Canadian dollar and so on, the sector that will
10 probably be able to weather it better than most
11 will actually be the weanling producers simply
12 because they don't have to incur all the feed
13 costs.
14 Now to move on, move into the section
15 of -- sorry.
16 MR. MOTHERAL: Just going back to the
17 start, and you may have said it, this check off
18 for Manitoba Pork Council, is that mandatory?
19 MR. DICKSON: Yes.
20 MR. MOTHERAL: Is there any
21 possibility, can somebody volunteer to go out and
22 not be part of it?
23 MR. DICKSON: No. Under the marketing
24 regulations, pigs are regulated product. You have
25 to be registered with us to be a hog producer in

1 Manitoba.
2 MR. MOTHERAL: Thank you.
3 MR. DICKSON: The first section is on
4 nutrient management and there's an executive
5 summary provided for you. I will leave that. The
6 key point I want to make here is nutrient
7 management, that's management of nitrogen and
8 phosphorus, in the animal-plant-soil system was
9 examined using the pathway of flow of nutrients in
10 the animal system and the pathway of the flow of
11 nutrients in the plant-soil system using nutrient
12 cycles. So that will give you the model by which
13 we'll go take a look at this.
14 And I will turn to the section on
15 management of nitrogen and phosphorus in the
16 animal system. We provided a little diagram there
17 to show you how this flows. Most of the nitrogen
18 is in the diet of the pig as a protein. And these
19 are made of amino acids. These amino acids'
20 composition don't precisely match the animal
21 requirements. And as a result, the animal
22 excretes the excess nitrogen. And 40 to 75 per
23 cent of the nitrogen ingested is actually
24 excreted. And this is typical of the mammalian
25 systems.

1 Moving on. Some of that nitrogen
2 that's excreted is in the form of ammonia and that
3 can account for 30 to 40 per cent of the excreted
4 nitrogen. That will be present either in the barn
5 or from the storage structure.
6 I'm outlining here a series of
7 strategies to how we've been trying to reduce that
8 nitrogen excretion and the volatilization of the
9 ammonia. And we have a variety of strategies that
10 have come forward or are continuing to be adopted
11 throughout the industry. One is, in terms of the
12 actual nitrogen excretion, but trying to reduce
13 the dietary protein content. We're trying to
14 increase the dietary energy so that with less
15 feed, they actually get the energy they need.
16 Trying to use different types of non-starches to
17 reduce -- to increase that energy component. And
18 the big one of course is phase feeding where you
19 match the protein requirements of the animal
20 according to its growth curve. As you get older,
21 you need less protein to put tissue on.
22 In terms of ammonia emission from the
23 actual storage facility during handling. Exposure
24 to air is a key item. And here we need to take a
25 look at how we can combine things like frequent

1 barn cleaning covers and so forth. Covers have
2 definitely been shown to reduce the volatilization
3 of ammonia and you could have straw covers or
4 plastic covers and the range is from 60 to 84 per
5 cent in terms of reductions. About 15 to 20 per
6 cent of the hog applied to land in Manitoba is
7 protected by straw and plastic covers during
8 storage.
9 In terms of phosphorus. Most of the
10 phosphorus fed to hogs is in the form of phytate
11 which is actually in the grain. This is not
12 easily digestible and therefore we've had to add
13 inorganic or more bioavailable source of phosphate
14 to the diet. Pig rations normally contain between
15 .6 and .8 per cent of total phosphorus as phytate
16 and we've had to supplement with inorganic
17 phosphorus. 50 to 60 per cent of the phosphorus
18 in the ration may be excreted in urine or in fecal
19 material.
20 And then we have some strategies to
21 reduce phosphorus excretion. And a core point
22 here you'll probably run into is when we try to
23 apply manure as a fertilizer based on the nitrogen
24 standard, we run into an imbalance with the amount
25 of phosphorus that's in the manure. And so the

1 issue now is how to bring that phosphorus back
2 into balance so that we can meet crop nutrient
3 requirements.
4 By adding phytase, which is an enzyme
5 to the ration, you can actually reduce the
6 requirement for phosphorus in the diet. We can
7 actually -- the content of the feed can be reduced
8 to about .4 of the total phosphorus in the ration.
9 Phase feeding has played a key role
10 and I have provided some information on that.
11 And by using these strategies, a 50
12 per cent reduction in dietary phosphorus
13 requirement is achievable. And the industry is in
14 the process of doing that right now.
15 60 per cent of all hogs produced in
16 Manitoba are fed diets with the phytase in the
17 ration. One of our blocks, and I point this out
18 in the paragraph, is that the regulations under
19 the federal regulations on feed require a certain
20 addition of phosphorus to meet the federal
21 standards. And Canadian Pork Council some years
22 ago asked the federal government to take a look at
23 changing that regulation to account for the fact
24 that we now use phytase in a ration.
25 In terms of management of nitrogen and

1 phosphorus, we want to point out the application
2 of manures to crop land is one of the best methods
3 of recycling plant nutrients. Plant nutrients
4 removed from the soil in the harvested portion of
5 crops is fed to the animals and then returned to
6 the soil as manure.
7 And I put in the various calculations
8 and charts here about the amount of nitrogen and
9 phosphorus that are produced from manure from the
10 hog industry. And our calculations are total
11 nitrogen excreted, and that's excretion, is about
12 30,000 metric tonnes of nitrogen. We have about
13 4.7 million hectares of land in the province. And
14 if you include tame hay, it's 5.36 million
15 hectares. If you put on a moderate application of
16 nitrogen, we would use 9 per cent of the land in
17 crops and hay. Now this is based on excretion.
18 About 30 per cent of the nitrogen is volatilized
19 and therefore you can reduce the land requirement
20 to about 6 per cent of the land in annual crops.
21 And to give you some perspective on
22 this thing. Sales of commercial nitrogen
23 fertilizer in the province are 300,000 to 350,000
24 metric tonnes. The total amount of nitrogen
25 excreted by hogs in Manitoba is approximately 11

1 per cent of the amounts of nitrogen added to
2 commercial fertilizer in 2005.
3 The amounts of phosphorus added as a
4 fertilizer in 2005 was approximately 46,000
5 tonnes, according to the Lake Winnipeg Stewardship
6 Board. And this is phosphorus, not phosphate.
7 You have to use a multiplier to get the phosphate.
8 The hog industry, according to this report,
9 excreted 11,000 tonnes of phosphorus. The land
10 area required for recycling of phosphorus at crop
11 removal rates of 15 kilograms per hectare per year
12 is 733,000 hectares or approximately 15 per cent
13 of the land in crops. The nutrients excreted in
14 manure are used and should be used to replace
15 nutrients purchased or imported as fertilizer.
16 The problem is not too many nutrients in soil, the
17 problem is lack of adequate distribution from
18 areas of high livestock density to areas of mainly
19 crop.
20 And then we put in a series of charts
21 here about the content of manure. The key thing
22 here too is we'll talk later about the regulations
23 and so on, but we provided some charts here
24 showing the nitrogen cycle, the phosphorus cycle.
25 The key thing here, most of the added phosphorus,

1 but it undergoes reactions with the soil and is
2 thus held in relatively insoluble and immobile
3 forms. And clay soils have a high phosphorus
4 retention capacity.
5 And then we put a chart in here
6 showing if you allow the level of these nutrients
7 to build up in the soil like phosphorus, you can
8 actually start to see movement or increased levels
9 of soluble phosphorus entering into the
10 environment.
11 This issue has been identified a
12 number of years ago. And through much discussion,
13 the province has introduced an amendment to the
14 manure regulations dealing with phosphorus and
15 also with commercial fertilizers and so on. And
16 these limits are all described here in the report.
17 And my understanding is you had met with Manitoba
18 Conservation and they've gone through these
19 regulations with you.
20 In terms of transfers of nitrogen to
21 the atmosphere, one is through volatilization and
22 also from denitrification of the manure in the
23 soil in the form of nitrous oxide. We also
24 outline here various strategies to reduce
25 transfers of nitrogen from the soil to the

1 atmosphere. Pointing out like 70 to 80 per cent
2 of the liquid hog manure in Manitoba is injected
3 directly into the soil which reduces
4 volatilization. As long as it's applied at the
5 correct rates, they can avoid groundwater
6 leaching. It's very unlikely that environmentally
7 significant amounts of phosphorus, unless large
8 amounts are added over a long period of time, that
9 we're going to see any leaching. It's maybe of
10 concern in high soil test phosphorus levels in
11 certain soils, especially those with tile
12 drainage. But if extractable phosphorus levels
13 are maintained at levels suitable for crop
14 production and at levels at which risk of
15 phosphorus transfer via run-off is low, leaching
16 of significant amounts of phosphorus is very
17 unlikely.
18 We talk in here about clay soils and
19 how they contrast with sandy soils and so forth
20 and some of the uses of things like forage crops
21 and so on. And we talk about how recharge occurs.
22 We'll touch on that later on when we talk about
23 groundwater supply.
24 I move on to a section called
25 strategies to reduce transfer to groundwater. The

1 key here is the best strategy to minimize leaching
2 of nitrate is to maintain as low a level of
3 nitrate in the soil as feasible and to treat
4 sensitive areas with due diligence. We talk a
5 little bit here about forages and the key role
6 that they can play in some areas where the nitrate
7 seen in sandy soil has moved down through the
8 profile and they can be recovered.
9 In terms of transfers of nutrients to
10 the surface water, run-off and erosion are the
11 major pathways. Soil type greatly affects run-off
12 and erosion. And slope, steepness, proximity of
13 fields to ditches and so on, perennial forages
14 will increase the infiltration rates, which means
15 they can reduce the potential for run-off.
16 Reducing tillage systems can reduce surface water
17 contamination when nutrient transfer is mainly by
18 erosion but it may be ineffective in reducing
19 nutrient transfer when it's in a soluble form.
20 Different soils have different capacities to hold
21 nutrients. And there's various descriptions in
22 here about this transfer process and point sources
23 of phosphorus and so on in the environment.
24 We'll keep moving. Strategies to
25 reduce transfers to surface waters. The thing we

1 want to say here is that these are difficult and
2 we need more work done in terms of research. The
3 trick here is to maintain soil nutrient levels
4 below threshold environment levels. And on that,
5 we have the regulations in place that can provide
6 some guidance on that.
7 And then I repeat here some of the
8 techniques in reducing and then improving this
9 ratio from nitrogen to phosphorus for crop
10 nutrient balance.
11 In the next section, we provide stuff
12 on crop growth and nutrient uptake. Just a point
13 here. Injection of liquid hog manure has
14 consistently resulted in greater crop nutrient
15 recovery and yield compared to broadcast and
16 incorporated methods. Phosphorus in hog manure is
17 a good source of phosphorus for crops.
18 Now, the key part of the presentation
19 here is on nutrient budgets and balances.
20 Johnston and Roberts have provide a very detailed
21 analysis of the agricultural regions of the
22 province and we will see that on table 9. And if
23 you look through that, you can see the different
24 regions as to what balance they are in terms of
25 phosphorus in those particular regions. And you

1 can see, for example, region 9 has an imbalance of
2 23.3.
3 The issue we're trying to get here is
4 that livestock production, from a phosphorus
5 replacement standpoint, could be increased
6 substantially in most areas before inputs of
7 phosphorus exceeded outputs, providing fertilizer
8 phosphorus use declined. And I think what we're
9 trying to get at here is that we can get a better
10 balance in most of the districts here by simply
11 cutting back on the amount of artificial
12 fertilizer that's applied and start treating the
13 primary source of phosphorus from manures and then
14 adding artificial rock phosphate to those areas
15 where we need it.
16 And there's another study that was
17 done in four Manitoba municipalities, Hanover, La
18 Broquerie, Roland and Sifton to to give you a
19 comparison between the different districts and how
20 much nitrogen and phosphorus is in their soils in
21 terms of inputs and outputs, the various losses
22 through volatilization, denitrification and so
23 forth and what residual levels they have. And as
24 you can see, some areas of the province actually
25 have deficiencies in various elements.

1 This study showed that a small part of
2 Manitoba has a positive imbalance between inputs
3 and outputs of nutrients. Strategies to reduce
4 inputs and increase outputs of nutrients is needed
5 to increase environmental sustainability.
6 Now, in terms of strategies to
7 maintain nutrient balance, the four key methods
8 here. One is to reduce the inputs of nutrient in
9 feed by using phase feeding, manipulation of
10 diets, use of enzymes to reduce overall inputs of
11 nutrients. Two, use crops with high nutrient
12 demand and maximize fertilizer yield to increase
13 nutrients. Three, minimize the wastage of feed
14 and maintain good animal husbandry to maximize
15 gains in weight per unit of feed. And then use
16 better genetics when ever possible.
17 Now, that was on nutrient management.
18 Then we need to move over and look at manure
19 management. And the key thing here is, how you
20 handle manure depends on whether it's a solid or
21 it's a liquid. And I have provided a chart here
22 describing the various methods of collection,
23 transfer, storage, treatment, utilization,
24 depending on the type of manure that they are
25 dealing with. And it's absolutely fundamental to

1 the sustainability of a farm that you handle the
2 manure. It's one of those core management
3 activities that has to be attended to properly.
4 The design and management of these
5 systems is to ensure that they prevent leakage to
6 the environment, that they provide an appropriate
7 level of odour control, and have sufficient
8 capacity to provide flexibility for the timing of
9 land application operations. And many operations
10 have been designed by professional engineers.
11 There are a variety of requirements under the
12 livestock manure and mortalities management
13 regulation dealing with construction of these
14 things. They all have to have permits, and these
15 permits ensure that the requirements of these
16 structures are designed to protect surface water,
17 ground water and soil. Not only do the manure
18 regulations have to be considered, also the
19 proponent has to look at what requirements the
20 local municipality might have, how close are they
21 to fields for application, what would be the
22 impact of nuisance odours, should they use
23 existing trees and bush, plant additional shelter
24 belts? Most liquid systems hold 300 to 400 days,
25 at least the larger ones do. And this is to allow

1 flexibility of timing, because we have this narrow
2 window of opportunity to spread in the spring or
3 the fall. Water use consumption is carefully
4 monitored, because essentially you have to store
5 it at the other end. So to reduce costs, one is
6 very careful about how much water one uses in a
7 barn.
8 Typical structure in Manitoba is an
9 earthen manure storage structure, and we provide
10 some little diagrams here to show how these look.
11 They are all carefully engineered. They are
12 inspected during construction, and all the details
13 in terms of compactions and porosity and so on are
14 all embodied in the regulations and have to be
15 inspected by a third party.
16 In terms of solid manures, there's
17 been new regulations come forward in terms of
18 dealing with field storage and many producers are
19 now being brought in within those regulations.
20 And the concept, we'll talk about it later, but
21 all producers have to follow these regulations
22 regardless of size.
23 A new development is being the use of
24 hoop structures and quonset shaped metal
25 structures. These are covered with polyethylene

1 tarps. They also have to be careful where they
2 store the manure and so on, both inside the barn
3 itself and when it's excavated out and a new crop
4 brought in.
5 Manure storage structures, if they
6 were built before 1994, are now required to be
7 registered with Manitoba Conservation. Any other
8 structures now have to be registered as well. And
9 I've outlined some of the details in here.
10 In terms of the manure management
11 plans, I think it is a core part of the
12 regulations. The purpose of this regulation is to
13 prescribe requirements for the use, management and
14 storage of livestock manure and mortalities in
15 agricultural operations, so that livestock manure
16 and mortalities are handled in an environmentally
17 sustainable manner. And that's the core part of
18 how these plans are developed. So I want to
19 emphasize this issue of environmentally
20 sustainable.
21 In terms of manure management plans,
22 we provide some details here how they were
23 registered under the Environment Act in 1994 and
24 there's been various amendments since then.
25 As of November 2006, the Department of

1 Conservation has been dealing with 488 manure
2 management plans, of which 398 belong to hog
3 operations. According to our statistics, there
4 are supposedly 424 potential operations. We don't
5 know who these other 26 are. All the operations
6 we know are registered.
7 Operations below 300 animal units
8 don't have to supply a manure management plan
9 unless so directed, but they are bound by all the
10 various regulatory requirements in terms of
11 nutrient to the environment and so on.
12 If the farmer doesn't fill in his own
13 manure management plan and he has it done by
14 somebody else, there are requirements in terms of
15 being a member of an appropriate professional body
16 and these people have to have some training. The
17 key point here, all these plans have to be filed
18 prior to land application. And then we have a
19 huge section in here on land-based requirement
20 calculations and how you go about it. And what
21 we're trying to do here is to show that there is
22 significant effort to prepare these manure
23 management plans. It's not an easy task to go
24 through.
25 Then when you get into the actual

1 application the field, we provide the various
2 descriptions of systems there. For example, the
3 manure has to be agitated, there's manure on-site
4 sampling, the application method is actually
5 monitored, records are kept, and Manitoba
6 Conservation does the general monitoring and
7 enforcement activities. And there's various
8 statistics, various issues that have to be
9 reported are listed out as the final section.
10 I'd like to move on to land use
11 planning as the next title. Sorry, questions?
12 THE CHAIRMAN: Nothing at this point,
13 thank you.
14 MR. DICKSON: We are going to be going
15 to land use planning and we would ask Peter Mah
16 here to deal with this.
17 PETER MAH, Director, Community Relations &
18 Sustainable Development, Manitoba Pork Council:
19 MR. MAH: Thanks very much, Andrew.
20 What I'd like to do over the course of
21 the next few minutes is just walk you through
22 basically what the provincial and local
23 requirements are with respect to land use planning
24 and the development approvals process. I think
25 it's a good, safe bet to say that at many of the

1 public meetings that I've gone to at the local
2 level, and even within the City of Winnipeg, many
3 people do not appreciate, nor do they know all the
4 rules and regulations that are in fact in place to
5 regulate hog production. So I will walk you
6 through very briefly a little bit about the origin
7 and the evolution of the land use planning,
8 because I think it gives you some sense of where
9 we have been and where we are today, to provide
10 context. I would like to spend a little bit of
11 time on the new Planning Act which came in on
12 January 1st of 2006, and in particular the
13 reference to the local livestock operations policy
14 which is mandatory across the province, and at the
15 same time give you some sense of how those
16 policies are actually guided by the set of
17 provincial land use policies which is very
18 critical to a whole host of provincial interests,
19 and then walk you through, in a chart form, the
20 actual livestock approval process.
21 Near the end what I'd like to do,
22 Mr. Chairman and commissioners, is give you some
23 of my own opinions relative to current weaknesses
24 with the process. I'd like to outline an
25 alternative, which in many ways is not a major

1 alternative, but I think some tweaking, which we
2 believe would provide some better balance and
3 remove some of the controversy that we see time
4 and time again at the local level. And then I'd
5 like to wrap up with some comments about what I
6 would refer to simply as a comprehensive safety
7 net, a basket of rules and regulations which all
8 intertwine, basically, to provide the confidence
9 which we believe the hog industry is working
10 through and the public can have the confidence in
11 that the environment is in fact protected, and
12 then close off again with some minor points on
13 closing comments. So maybe with that, if I can
14 just stand up for a minute. Hopefully this works,
15 if I could sort of move around, let me use this
16 little pointer from time to time and maybe it's
17 best if I stand over here.
18 First off, in terms of the actual
19 Planning Act itself, it was first adopted in 1975.
20 At that point, the province had instituted the
21 Planning Act really to institute subdivision
22 control over land division. At the same time, we
23 empowered municipalities to enter into local
24 planning and come up with basic planning
25 statements, BPS's, which today has been supplanted

1 by development plans and zoning by-laws.
2 Over the course of time, the Planning
3 Act was adjusted in 1988 by the adoption of a set
4 of nine provincial land use policies. And those
5 provincial land use policies enunciated clearly
6 what the provincial interest is and was at the
7 time relative to the development of land. And it
8 had nine policies with respect to general
9 development, development around urban centres and
10 villages, agriculture, renewable resources, water
11 and shore land, recreational resources, natural
12 features and heritage resources, flooding and
13 erosion, provincial highways and mineral
14 resources.
15 So you can see back then, even in
16 1988, that the province had already been thinking
17 about trying to integrate all of the resource
18 conservation interests with land use planning and
19 development.
20 In '94, it moved on to add in, as a
21 result of what we call COSDI, the Consultation on
22 Sustainable Development Implementation, which was
23 a very public process back then, to look at
24 adopting a set of principles and guidelines of
25 sustainable development. Of course, as you know

1 today, we have the Sustainable Development Act
2 that balances social, economic and environmental
3 development. So this has been embodied into the
4 provincial land use policy.
5 And then most recently in 2005, you
6 may recall that the provincial land use policy
7 number 2, which is specific to agriculture, went
8 through a major amendment basically to adopt new
9 provisions relative to livestock, and in so doing
10 had set in place a minimum mutual separation
11 standard. Now this is very, very important. What
12 it did basically is provided the guidance and the
13 farm practices guidelines, it said, based upon
14 those guidelines which have adopted and
15 recommended by a multi stakeholder committee, who
16 adopted into regulation and provided a guidance, a
17 minimum base of separation standards right across
18 the province. And then, as we know, during that
19 period of 2004/05, there is extensive consultation
20 right across the whole province from
21 municipalities, special interest groups,
22 agriculture, environmental groups, conservation
23 groups, on the design of the new Planning Act
24 which was at the time dubbed as Bill 40, and
25 subsequently came out with a new act called Bill

1 33.
2 While Bill 33 came to be -- on
3 January 1, 2006 was enacted. It provided, in
4 essence, to maintain a dual role in planning
5 between local authorities, which could be local
6 councils and planning district wards, and in fact
7 a partnership with the province, a dual role. And
8 basically what it said, while about 98 per cent of
9 land use planning in Manitoba, municipalities in
10 Manitoba, roughly had been involved in planning,
11 the Planning Act said, from this point on, land
12 use planning is mandatory for every municipality
13 in the Province of Manitoba. And in so doing had
14 mandated that by January 1st, 2008, which is not
15 really that far off, that every municipality with
16 an agricultural interest must prepare a livestock
17 operations policy. So it must go ahead and
18 proceed. And I'll talk a little bit more about
19 that.
20 One of the key fundamental areas which
21 the new Planning Act clearly defined was, as a
22 foundation, was a clear role and responsibility
23 between local municipal government and the
24 province. In the case of municipal government, it
25 was felt that land use jurisdiction should be the

1 jurisdiction essentially of municipal Manitoba,
2 municipal councils who were duly elected, who know
3 the area perhaps better than anybody else,
4 certainly anybody in the City of Winnipeg and
5 politicians, knew it had a sense and pulse of the
6 community in terms of goals, objectives and their
7 aspirations, and so could better balance the
8 issues of local land use. Now, comparatively
9 speaking, when you look at the province, it was
10 felt through the consultation process and adopted
11 by province that the responsibility for
12 environmental protection should rest with, and
13 this is very important, rest with the province.
14 Because technical issues, the complexity with the
15 environment doesn't rest with just simply
16 municipal units. You are talking about drainage,
17 you are talking about water, you are talking about
18 air, you are talking about the general environment
19 which can transcend in most cases municipal
20 boundaries, sometimes provincial jurisdiction,
21 sometimes international boundaries. And so with
22 the expertise that's required to be able to
23 effectively monitor, effectively control and
24 administer environmental protection measures, that
25 was left to the province.

1 I talked about the livestock
2 operations policies in Minnedosa. This is now
3 mandatory right across the province. January 1st,
4 2006, we're already a little over a year into it
5 and we find basically that we're finding that it's
6 fairly slow, but basically the idea is that every
7 municipality is to set standards for siting of
8 livestock and specific set-backs for livestock
9 operations in their respective areas, again basing
10 it on the provincial land use policies, but
11 there's an opportunity for municipalities to notch
12 up, if you will, those standards that they felt
13 appropriate.
14 Mind you, there is some limits to
15 that. Those limits are that the provincial land
16 use policy says they must be reasonable and they
17 must be generally consistent with the provincial
18 land use policy standard, but there is some
19 latitude.
20 At the same time, they are supposed to
21 look at their land base, the municipalities and
22 the communities are to look at their land base and
23 say whereabouts, based on existing land use, on
24 future land use plans, on natural resource
25 features, where are those areas with which

1 livestock would and should be developed? And
2 conversely, what areas should not be developed for
3 livestock? And so they could designate certain
4 areas where livestock of a certain size could be
5 allowed outright, if they met certain standards,
6 or they could be regulated and allowed up to a
7 certain maximum. And in the case where they are
8 not allowed, for instance, historically, and we
9 are seeing over time around urban centres, a
10 buffer area around urban centres, around
11 designated recreation sites, cottage areas, and
12 this type of thing.
13 Well, how well are we doing? Progress
14 and updates. A conversation with Manitoba
15 Intergovernmental Affairs recently, they have
16 indicated that they know municipalities have
17 embarked on process for these livestock operations
18 policies, but unfortunately and regrettably,
19 things are slow. It may well be for a number of
20 reasons. It could be, for instance, because
21 municipal elections were held last year in
22 October, and typically local decision-making
23 starts to stall before an election and certainly
24 takes time for it to gear up right after an
25 election as new officials carry on their new roles

1 and become familiar with them. At the same time,
2 some of them, quite honestly, might be looking for
3 some indication of what this particular Commission
4 might be coming up with in terms of results.
5 The bottom line is, we're having a
6 number of municipalities that are working on it,
7 but at least one-third, as I understand it,
8 haven't even begun yet.
9 So what are the implications? Well,
10 first of all, we do know that the provincial land
11 use policy already sets in place the minimum
12 siting and setback requirements, and have already,
13 by outright, have prohibited livestock operations
14 on certain lands, class 6, class 7, and unimproved
15 organic soils, that is outright prohibited. So we
16 have that as a base.
17 So what's the bottom line? If you
18 look at the number of regulations that are in
19 place under the Planning Act, and those
20 regulations that are now at the local level that
21 still need to be updated but they are still in
22 place, you've got livestock applications that are
23 still being regulated. It's not today that we're
24 starting from zero. We have in fact a very
25 substantial base of regulations for every

1 livestock operation, be it chicken, cattle, hogs
2 or whatever.
3 Well, here's an example under table
4 number 1. Table number 1 actually shows the
5 separation distances from that provincial land use
6 policy number 2. And rather than go through this
7 whole chart, I just wanted to point out and
8 illustrate what it says. First of all it says,
9 based upon size of a livestock operation based on
10 animal units, and I'm going to use the example of
11 201 to 300 animal units and go across this column
12 here, it will determine the minimum separation
13 distances between, in this case, an earthen manure
14 storage facility and a single residence. A single
15 residence, no other place do you see that for any
16 other development, for a livestock operation from
17 single residence not connected to the operation.
18 Also, there's a certain distance, in this
19 particular case 200 metres from the barn and from
20 a non-earthen manure storage facility. So in this
21 particular case here, we're talking a quarter
22 mile, here 200 metres is one-eighth of a mile. In
23 case of a designated area, and that is designated
24 under the development plan, a recreation area, an
25 urban centre, a rural residential designated area,

1 we're talking in this case here, a 300 animal unit
2 operation must be at least 1 mile away, 1 mile
3 away or 1.6 kilometres. Or in the case of a barn
4 itself, it must be a little over one kilometre or
5 two-thirds of a mile away. Those are significant
6 distances which bottom line are in place.
7 The other thing I should just point
8 out as well is that the intent of the provincial
9 land use policies were those distances to be
10 mutual separation distances, the intent of which
11 is that if you have an existing operator that has
12 a farm, invested time, money and effort into the
13 enterprise, raising a farm family, that that
14 enterprise in agricultural land needs protection.
15 So that rural residents should not be able to come
16 in and violate those separation distances, which
17 are going to potentially pose conflicts, not only
18 for the operation but in future for the rural
19 residences. So clearly these are to be intended
20 to be mutual separation distances.
21 Let me just go on. Other things that
22 people typically do not know that are already
23 included under the Environment Act, the manure and
24 mortalities management regulations. I have gone
25 to countless meetings and the people, they are

1 surprised by this, and yet this has been in place
2 for many years. It says, first of all, for siting
3 and construction requirements for manure storage
4 facilities, whether above or inground, that you
5 have to be at least a minimum of 100 metres from
6 any surface water course, sink hole, spring or
7 well, or the boundaries of an operation. That
8 comes as a surprise to many, many people.
9 Schedule B. Well, we know first of
10 all that we're moving away from winter spreading.
11 And for the large part, there was a large part of
12 the Red River Valley special management area,
13 which was adopted on November 8, 2006, a huge area
14 that was inundated by the last major floods which
15 no longer can you spread manure -- up until a
16 certain time, there's a transition period for a
17 few years with which to be able to have those
18 existing operations ensure that they can adjust.
19 But any new operations, any new expansions cannot
20 spread in the winter time. The winter time
21 basically is a period between November 10th of one
22 year and April 10th of the other. So there's a
23 five month period with which they cannot winter
24 spread. And you will see as time goes on, year by
25 year, that more of the producers who are currently

1 exempt going through, and currently they are
2 basically smaller operations of 300 animal units
3 or less, or those between a barrier of 300 to 400
4 animal units will have a bit of, a few years in
5 which to comply. But anything over 400 animal
6 units, there's no winter spreading.
7 Let me go on to one more thing. In
8 the case of spreading, basically they have to stay
9 a minimum of 10 metres away from any property
10 boundaries. But, again, relative to slope, there
11 is a scale, if you will, where again the distances
12 increase from manure spreading, depending upon how
13 the slope is. So if you look at the last one here
14 where the land is anywhere from 6 per cent or
15 more, and less than 12 per cent slope, you've got
16 to be at least 450 metres away from any surface
17 water course, sink hole, spring or well. Anything
18 over 12 per cent, you're not allowed to spread.
19 And then I'll just move very quickly
20 now to again set-backs from surface water and
21 surface water courses. Again, depending on the
22 features, depending upon the manure application
23 method, there is certain set-backs that are based,
24 either with vegetated buffer strips or
25 non-vegetated. Again, the point is that you've

1 got a tremendous amount of regulations in place
2 that would, first of all, influence the siting of
3 an operation, and then thereafter the operation of
4 the operation on a daily basis.
5 This livestock operation review
6 process, I'll quickly run through it. Basically,
7 the application is put forward to the RM, and as
8 Andrew has indicated already, there is a
9 tremendous amount of due diligence prepared by
10 farm operator in siting, picking the right site,
11 doing the engineering test, soil tests, preparing
12 the application, and getting that before council.
13 What happens is that application goes to the
14 provincial technical review committee for a report
15 and recommendation, comprised of Manitoba
16 Agriculture and Food, Water Stewardship
17 Intergovernmental Affairs and Manitoba
18 Conservation. These specialists review that and
19 then provide that report, not only to the public
20 and to the council, but to the producer, and then
21 there's a public hearing for conditional use.
22 Now, I'll say this here: This
23 conditional use process, I think, time and time
24 again, I've seen it very, very contentious. It
25 pits opponents against proponents and supporters.

1 It's an adversarial process, and I think there's a
2 better way. In any event, I'll talk about that in
3 a minute.
4 Basically, as you go through it, that
5 application must go through this process. And if
6 it meets certain criteria, it can be approved with
7 or without conditions, and invariably it's always
8 with conditions.
9 Even if a local permit is in fact
10 issued by the local council, it is still subject
11 to provincial approvals on the environmental
12 front, in terms of water rights licence, in terms
13 of the manure storage permit. In each and every
14 case, engineering requirements and analyses is
15 required.
16 If those issues, if licences and the
17 permits are issued, between the three of those,
18 permits, licences -- and it signals the proposal
19 can proceed to construction. And so at that point
20 the operation proceeds to construction, and still
21 again, as I have mentioned, must comply on a
22 day-to-day basis with regulations.
23 I'm just going to skip this chart
24 here, it talks about the actual TRC process. But
25 I'm going to move now towards what I think, just

1 to wrap up here, in terms of predictability and
2 consistency, we believe that the up-front local
3 livestock planning is an excellent, excellent
4 vehicle. The local livestock standards, policies,
5 the consultation process with the public is
6 essential, but we note that the conditional use
7 process, like a court, is adversarial. And we see
8 that time and time again, the emotional debate,
9 and some innuendos, and not perhaps always
10 fact-based information comes forward, and not
11 enough good science to be able to balance it. And
12 we see time and time again that applications are
13 denied for inappropriate reasons.
14 However, local council has the hammer,
15 if you will, the decision making. And they have
16 two tests with which to be able to determine
17 whether in fact that application should be
18 approved; a test of compatibility with the local
19 area, is it land use compatible; and secondly,
20 whether it's detrimental or not to the health and
21 welfare of the general residents in the area.
22 Those two criteria, I have to tell you,
23 Mr. Chairman and Commissioners, is subject to
24 emotional debate and the NIMBY syndrome, "not in
25 my backyard." And this is where it starts to

1 break down. And local councils, and I know some
2 of the Commissioners have been on council before,
3 you know darned well kind of pressures that are
4 brought to bear upon special interest groups and
5 by local citizens who are ratepayers who object to
6 a proposal and supporters in many ways remain
7 silent.
8 Let me go to what I think is what's
9 happening here. I think, basically, when you look
10 at denial and fairness, a livestock application,
11 and this is important to realize, that a livestock
12 application today, apart from the pause, could be
13 denied despite meeting all provincial requirements
14 and all local requirements. And that's with
15 respect to all of the policies in place at the
16 provincial level and at the local level. It can
17 meet the siting and separation distances, it could
18 meet the minimum setback requirements. And in
19 fact, through the engineering, design and
20 monitoring, it could meet all of the construction
21 requirements. And yet the process is flawed to
22 the point where, without any reasons, a municipal
23 council can deny that application based on those
24 two tests of compatibility and health and welfare,
25 and without any appeal, without any appeal to the

1 proponent and any of the supporters. Now, we
2 question whether that is fair.
3 As an alternative, we think again the
4 up-front local planning is good. We believe it
5 should be using reliable resource information as
6 much as possible backed by good science. We feel
7 the extensive public consultations are balanced
8 with community objectives and values is extremely
9 important, because that's where you start to
10 tailor your policies and development standards to
11 your area. But we believe that one of the things
12 that you could do is recommend to the province to
13 tweak the Planning Act so that you can identify
14 and zone the best areas for livestock. Areas
15 where -- and the best land use characteristics,
16 sparse population, you've got good water, good
17 drainage, level, fairly level land, heavily
18 forested perhaps for some screening and so on.
19 You could find these areas and at that point
20 determine from your livestock policies where they
21 should go, what standards it should meet. And if
22 those proposed applications meet that criteria, we
23 believe that they should be able to proceed and
24 apply for a development permit, because they have
25 met all the requirements, provincially and

1 locally. What more can you ask for? And so we
2 believe that that should be put in place.
3 For all other areas, we believe that
4 the conditional use process probably is
5 appropriate, because there is a mixture of land
6 uses that still needs to be adjudicated, if you
7 will, by local council. In each and every case,
8 either of those two applications in those
9 processes would still require provincial approval.
10 That's the basis.
11 Section 118 says no development can
12 take place until all permits are obtained from the
13 province and so on, and all conditions are met.
14 So that is a safeguard.
15 Let me go on. There is the list of
16 other acts that apply. So it's not just the
17 Planning Act, it's not just the Environment Act,
18 livestock manure and mortalities, it is a whole
19 host of other things. Those permits, licences and
20 so on must be obtained.
21 So what does it mean? It means that
22 there's a comprehensive safety net, we believe,
23 that the public can be assured that the
24 environment is protected if we go through this
25 local and provincial process, this dual role that

1 I have talked about.
2 We have had extensive public
3 consultation over last two years. We are back in
4 the Clean Environment Commission, with all due
5 respect. We've asked the public for more comment.
6 And what we really need at this point, basically,
7 is to move on to fully implement the improvements
8 that have been sought after, have been negotiated,
9 have been adopted, and in fact have been proposed
10 more coming, and we need time to do that. And we
11 need time then to sit back, re-evaluate our
12 success and our performance, and then see if any
13 further changes -- or perhaps we've gone too far.
14 I might suggest maybe we've gone too far and
15 perhaps we need to go through this first and then
16 reassess.
17 So we've got a rigorous and complex
18 livestock approval process, for siting, for
19 approval, day-to-day operations on the farm are
20 regulated, we have public policies already that
21 are evolving because we know the livestock
22 operations policy more and more, every day, every
23 month, will come forward over the course of the
24 next year or so. We know the proposed nutrient
25 management regulations have been proposed by

1 government, only for consultation but they are
2 ready for adoption, I believe, pretty soon, and we
3 know that this new water management planning
4 system is going to be taking place within
5 watersheds. All of those will be impacting land
6 use planning. And I can assure you that the
7 Planning Act already says that a local community
8 must consider all water plans, all water
9 management plans in the design and update of land
10 use plans. So that's all starting to evolve in
11 front of us.
12 Hog farming, of course, is subject to
13 more media attention and monitoring than any other
14 sector. Some people would say that's bad and some
15 people would say that is good. What it means
16 nevertheless is that we're going to be subject to
17 more media attention, more monitoring by
18 government, so people can have some confidence as
19 we progress. And we, as an industry, start to
20 monitor our own production, we want to ensure that
21 we work with them to follow all of the rules and
22 regulations and we are actively doing that.
23 Lastly, I just wanted to point out
24 that the existing producers on the landscape
25 today, through the course of time, have met all

1 legal siting requirements for both the local
2 municipalities and province. This is an evolving,
3 changing rules and regulatory regime. And what
4 we're doing is our utmost to try to stay abreast
5 of that. We are doing our utmost to ensure that
6 everybody follows the rules and regulations. But
7 you can understand that every new regulation that
8 comes forward, every new restriction that comes
9 forward are being proposed as added cost to the
10 producer, added cost that might drive a young
11 farmer off the land, that will in fact maybe make
12 some operations less viable and forcing them, in
13 essence, to either get larger or disappear. And
14 so in many ways there are some downsides to more
15 regulations. I can appreciate that there is a
16 public interest here. I believe and we believe
17 very, very strongly that we have a comprehensive
18 safety net in place already.
19 THE CHAIRMAN: Mr. Mah, I have a
20 question or two. You had a slide, I don't know if
21 you can back up to, it is on page 46, a slide
22 entitled "Denial and Fairness." Now, earlier,
23 when you discussed livestock operation policies
24 that RMs are required to have in place relatively
25 soon, those policies will set out the standards

1 for siting, set-backs, et cetera, they will
2 designate where farms may be depending -- where
3 they may be, any size up to a maximum, or not at
4 all. Now, when we get to this denial and
5 fairness, and you say that they can be denied
6 despite meeting all provincial and local, et
7 cetera, policies, et cetera, are you saying that
8 where a municipality has a livestock operations
9 policy in place that defines those parameters,
10 they can still say no?
11 MR. MAH: Yes, Mr. Chairman, that's
12 quite correct. That's what we're pointing out to,
13 that's totally unfair. They've gone through all
14 of the time and expense to prepare a very detailed
15 application, they have worked with neighbours as
16 much as they can, came forward and met every one
17 of the provincial and local requirements, and go
18 to a public meeting and through a very vexatious
19 process, very emotional debate, through innuendo,
20 through perhaps not the application of sound
21 science, persons could come forward, and I would
22 think likely will still come forward and still
23 object to an operation because they don't want it
24 in their backyard, and hence put tremendous
25 pressure upon a council to apply a very subjective

1 and interpretive way that this area is not
2 compatible, this proposal is not compatible with
3 the surrounding area. That test of compatibility
4 is the subjective test.
5 Another subjective test, as I've
6 mentioned, Mr. Chairman, is the test of whether a
7 proposal is detrimental to the health and welfare
8 of neighbours in the surrounding area and their
9 property. If somebody can say, you know what, I
10 live in the area and it's not compatible with my
11 lifestyle and my residence, you know what, I don't
12 want that smell in spite of the fact that I moved
13 here, I should have known that there was an odour
14 that comes from some operations, it's not
15 compatible with my lifestyle. And Mr. Chairman,
16 of the local council, you must deny this
17 application because it's not compatible. And
18 that's what we're saying that, in the scheme of
19 things, an emotional debate puts a tremendous
20 amount of pressure on council, and on that basis
21 alone a council could deny that application.
22 THE CHAIRMAN: The next slide which is
23 entitled "Alternative," you talk about the second
24 and third items, use reliable resource information
25 and backed by good science. How do we define

1 reliable and how do we define good science? I
2 mean, scientists are like lawyers, they can argue
3 either side of an issue.
4 MR. MAH: That's correct. I think
5 that the bottom line is you start to look at, for
6 instance, one of the tests for liability is, is
7 the data, first of all, relevant to the area?
8 Because in many cases people bring up
9 circumstances that had happened in North Carolina
10 as something that was going to happen here in
11 Manitoba, in the RM of Louise? And that's not
12 relevant. Totally different climate, different
13 context. And so what we're saying here is use
14 relevant information. At the same time use
15 updated information. Don't use something that
16 goes back, way back in history in the 1960s or
17 something. What do we have in terms of water
18 quality data and soil data that is current? And
19 so that's the good resource information.
20 The good science, as I've indicated,
21 is there's a lot of rhetoric out there. Some
22 people call it pseudo science, because you go part
23 way into it. But science needs to be peer
24 reviewed. It needs to be balanced and it needs to
25 be tested. And I think that's where councils and

1 the province rely to a large extent upon the
2 scientific community at the university. Because
3 they are the ones that have the research
4 background, they are the ones who do the peer
5 review studies, and those are the ones who are
6 accountable. It's not Joe citizen, nor myself. I
7 am not a scientist, and I can only repeat or talk
8 about science that's based out of University of
9 Manitoba or here locally in Manitoba.
10 THE CHAIRMAN: You have in an ad a
11 number of weeks ago and then your insert on the
12 weekend, you talk about the amount that the hog
13 industry is contributing to Lake Winnipeg's
14 problems. And it's 1 or 1 and a half per cent.
15 You can bring in scientists from the university
16 who will make that case. I can bring in another
17 scientist from the University of Manitoba who will
18 say it's whatever, a significantly different
19 figure. Whose science do we accept? I mean,
20 that's where it may be that the local council has
21 to make a subjective decision on whose objective
22 science to accept.
23 MR. MAH: And I would agree with that.
24 I think local council --
25 MR. DICKSON: There's an answer to

1 that. In terms of science, I mean, one of the
2 issues is to have your material peer reviewed by
3 your fellow scientists. And a scientist who makes
4 a claim that is not supported by his fellow
5 scientists, that defines what good science is. So
6 that's why studies that are done on things like
7 lakes and so on need to be peer reviewed.
8 THE CHAIRMAN: No, I agree.
9 MR. MAH: I think the simple answer,
10 Mr. Chairman, is that local council has that
11 decision making power, and we would hope that
12 local councils, in exercising that power, would
13 look at the pros and cons of the science, because,
14 yes, they are going to have to make that
15 determination.
16 THE CHAIRMAN: Thank you. Don't get
17 anxious if our questions sort of eat into your
18 time, we will allow for that.
19 MR. DICKSON: We'd like to touch upon
20 the issue of ground water supply and quality, very
21 briefly. The key thing here is the majority of
22 hog barns obtain their water supply from wells
23 which withdraw groundwater from subsurface
24 aquifers. There are a small number of barns that
25 use water from dugouts or surface water sources.

1 The key thing on this is under the Water Rights
2 licensing process, this is all governed by the
3 Manitoba Water Rights Act and regulations. This
4 is a licensing program. The core objective is to
5 obtain the optimum development and use of the
6 province's water resources while sustaining the
7 resource base and maintaining environmental
8 quality. In other words, that's what the licence
9 does is to make sure that happens.
10 Now, everybody has to get a licence
11 except for domestic users who use less than 25,000
12 litres per day, and hog barns that use less than
13 25,000 litres a day are exempted as well. We
14 weren't able to get a number on those that are
15 exempted. But the department has issued, as far
16 as we know, 215 Water Rights licences. And by our
17 calculation, that should account for over
18 two-thirds of the production of the province.
19 When they get these licences, the core questions
20 that have to be answered, can the well supply
21 sufficient capacity to provide the required water?
22 Will the withdrawal of the water from this project
23 have a negative impact on other ground water users
24 in the area in the short or long term? And then
25 thirdly and most importantly, can the aquifer

1 sustain the required supply without depleting the
2 groundwater resource or causing a deleterious
3 environmental effect over the long term? So, in
4 other words, the regulations ensure that we can
5 protect our quality and our quantity.
6 Now, in terms of volume, this is based
7 on Manitoba Water Stewardship records, the
8 industry has been allocated a total of 4,440 cubic
9 decametres of groundwater per annum under 215
10 water rights licences. The average annual
11 allocation per water rights licence is 20.6 cubic
12 decametres per annum. The total allocation figure
13 excludes groundwater allocated to mixed users --
14 that is people who have small barns and also have
15 to use it for their well, for their well for the
16 house -- and surface water resources. But those
17 are a small number.
18 To put this into some sort of context,
19 that sounds like a lot of water, the average
20 annual precipitation on a section of land is
21 presented here. And we present a little
22 calculation, we go through this in terms of
23 average rainfall on a section of land. The annual
24 allocation of groundwater to the hog industry is
25 therefore the equivalent of an average annual

1 precipitation that would fall on 3.5 sections of
2 land. That's the total amount of water that gets
3 drawn on annually, 3.5 sections of land in all of
4 Manitoba.
5 Another comparison is with the City of
6 Winnipeg, and the accusation is always made that
7 the industry is using more water than humans and
8 so on. In comparison with the City of Winnipeg
9 which is authorized to remove from Shoal Lake
10 100 million gallons of water per day, that works
11 out to 365 acre feet per day, although the city
12 doesn't actually use all of this, the total
13 groundwater allocated under specific licence to
14 hog production amounts to 10 days of the city's
15 authorization, to provide some context.
16 In terms of siting and construction,
17 these are all governed by the Groundwater and
18 Water Well Act and the Well Drilling Regulations,
19 and we point those all out here and list them.
20 In terms of groundwater quality, other
21 measures to protect the groundwater are also found
22 in the manure and mortalities regulation, and
23 those are all spelled out in here.
24 And we try to find, try to answer this
25 question about contamination. And there's been a

1 higher level of concern and scrutiny of the
2 quality of the groundwater from wells. The
3 published document we could only find is one done
4 by the CEC Commission on the Village of Garson and
5 Rural Municipality of Brokenhead. And it stated
6 clearly in there, the source of the problem was
7 improperly constructed or maintained wells, and
8 malfunctioning septic tanks, septic fields, and
9 holding tanks. Now, that is also backed up by the
10 medical officer of health who stated, existing
11 wells contaminating the aquifer have to be
12 properly connected and abandoned, or abandoned.
13 That individual homeowners will be ordered to
14 correct or abandon defective wells and to repair
15 or replace leaking or inadequate septic fields
16 consistent with the requirements of provincial
17 legislation. And then we provide some background
18 information on groundwater and surface water, and
19 this is drawn on some American texts, and I'm not
20 going to go through those at all. I am going to
21 provide that background information.
22 MR. MOTHERAL: Can I stop you here for
23 a minute and just ask a question? You are
24 comparing the amount of water used to the City of
25 Winnipeg. Do you have any figures on the amount

1 of water used to the percentage of recharge from
2 the aquifers at all?
3 MR. DICKSON: Well, the water drawn
4 out is recharged. When you get your licence to
5 draw your water down, it assumes it's going to be
6 recharged.
7 MR. MOTHERAL: That's part of the
8 requirement of the licence?
9 MR. DICKSON: Right.
10 MR. MOTHERAL: I would like to get a
11 better idea, I mean, if the hog industry is using
12 so much cubic decametres or whatever it was --
13 kilo-pascals, how is that?
14 MR. DICKSON: The recharge will either
15 come from rainfall or from run-off, like from
16 other rivers and so on soaking into the ground,
17 coming into the --
18 MR. MOTHERAL: I realize that.
19 MR. DICKSON: So it's rain landing on
20 the ground. We use 3.5 sections of land in the
21 province in terms of water that falls. All the
22 other water that falls on the land at some point
23 either on surface run-off or soaks in.
24 MR. MOTHERAL: I guess what I want to
25 know, if you used 10 feet of water out of an

1 aquifer, how long does it take to recharge that
2 10 feet? I just want a simple --
3 MR. DICKSON: It depends on the
4 aquifer, it depends on the recharge rate within
5 different aquifers. But essentially the aim is
6 that the aquifer will recharge. You are only
7 taking out what the aquifer is capable of
8 recharging, of being recharged.
9 MR. MOTHERAL: That's all part of the
10 licensing?
11 MR. DICKSON: Right. And there is an
12 order of priority given to the licenses as well.
13 In other words, if you're in an area where there's
14 a limit on what the recharge capacity is, domestic
15 users usually get first priority and so forth
16 down, and industrial users, irrigation users and
17 so forth. And I haven't put all of those details
18 in here. But that's part of the licensing
19 requirement, you have to meet within all those
20 criteria.
21 MR. MOTHERAL: Thank you.
22 MR. DICKSON: In terms of surface
23 water quality, I direct just a little short
24 section in here, because a lot of it has already
25 dealt under nutrient management and under manure

1 management. And the key thing we want to point
2 out here is the hog industry supplies nutrients to
3 the crop industry to grow its crops. In terms of
4 surface water quality, the issue is all
5 agriculture. The agriculture industry has a
6 challenge here in terms of reducing the potential
7 for leakage of nutrients and so on from the
8 surface to surface run-off. What we're saying
9 here is there's a lack of research to some extent
10 on those.
11 And I provided an example in here.
12 Deerwood, some years ago did a lot of work on zero
13 tillage. And the information coming to date now
14 in those zero tillage fields was you might be
15 reducing the effect of erosion, the problem is the
16 level of soluble phosphorous has actually
17 increased because of rising organic matter in the
18 top surface. More soluble phosphorous tends to
19 come off those fields. Now the issue is, well,
20 what is a recommended practice? And we'll go into
21 that a little bit later.
22 We recognize there's a need to deal
23 with the level of phosphorus in a number of fields
24 in parts of the province, and we'll talk about
25 that in the next section. And we have standards

1 now set out in regulation. There's going to be a
2 period of adaptation when producers will have to
3 amend their manure management plans and have to
4 acquire additional application fields, or use
5 technologies to reduce the phosphorus in their
6 feeds, or separate -- concentrate the phosphorous
7 levels in their manures in some way so they can be
8 added to those areas which are short.
9 And I want to go back to that table 9
10 on the section on nutrient management, which is a
11 pretty critical table when you look at how to
12 balance the nutrients in the province. What
13 we're saying here in the final remarks is that if
14 the province wants to accelerate that process of
15 adaptation, and there's a public good involved
16 here, and that maybe the province should assist
17 producers to adapt to an enhanced or speeded up
18 means of trying to come more in balance.
19 I'm going to move onto the next
20 section of soil quality. We provide an executive
21 summary there, and then I'm going to move right
22 into the body of the paper.
23 The key thing I want to say here is,
24 manure is a useful soil amendment that serves as a
25 source of nutrients of crops as a fertilizer and

1 as a soil conditioner which can improve the soil,
2 chemical, physical and biological properties of
3 the soil. And for example in soil pH, which deals
4 with acidity or alkalinity of a particular soil,
5 we provide a description in here of the impact of
6 manure. But in the summary, the long-term
7 applications of hog manures will have small to
8 negligible effects on soil pH.
9 In terms of soil organic matter and
10 related soil physical and chemical properties, the
11 organic matter content of prairie soils has
12 significantly declined since cultivation has been
13 initiated here in the prairies. Soil organic
14 matter levels in many soils are only 40 to 60 per
15 cent of the content of soils in the virgin state.
16 Manures add organic materials as well as
17 nutrients. The added organic materials will
18 reduce the rate of decline of soil organic matter
19 and enhance the physical and chemical soil
20 properties that favour crop growth and microbial
21 processes. The long-term sustainability of
22 prairie soils will be enhanced. Numerous studies
23 have reported that increases in soil organic
24 matter or applications of manure resulted in soils
25 being more friable, less compact, more easily to

1 till, have increased water holding capacity,
2 better soil structure and aeration. Increased
3 water holding capacity is particularly important
4 in sandy soils because of their large particle
5 size and they can hold little water. The organic
6 fraction of very sandy soil is responsible for
7 much of its total water holding as well as water
8 capacity.
9 Manure's impact on soil infiltration
10 rate, and this is important in terms of reducing
11 potential run-off to surfaces and so on of
12 nutrients. The cation exchange capacity is
13 important in soils that their capacity is enhanced
14 by having manures. Soil organic manner content is
15 greatly affected by management of cropping
16 systems. And then I talk a little bit about
17 microbial activity and enzyme processes, and there
18 is quite a discussion in here about their impact
19 and the various enzymes and so on that occur in
20 soils.
21 The key here, manure additions to
22 soil, including hog manures, have a beneficial
23 effect on soil microbial activity, soil microbial
24 biomass and enzymatic processes. Nutrient cycling
25 and other important soil processes will be

1 unaltered or improved by long-term application of
2 hog manures at appropriate loading rates.
3 The issue has come up a number of
4 times about micronutrients and trace metals.
5 These are, when you see micronutrients and trace
6 metals in manures, this is a reflection of the
7 feed that it got. It is either the crop has
8 actually got it in itself, or they have been added
9 to the ration to enhance the capabilities of that
10 ration, improving the productivity. And some
11 minerals have been added because of their impact
12 as growth stimulants or as disease control
13 measures. And there's a long lengthy description
14 of all these various minerals and the impact they
15 have. And I'm not going to go into depth on that.
16 In terms of strategies to reduce
17 loadings, research has shown that although heavy
18 metals tend to build up in soil from application
19 of manures, these metals do not affect soil
20 productivity, food safety and environment quality,
21 if not added above established guidelines. And
22 there are already guidelines in place because of
23 the need to deal with municipal waste and so on,
24 and there's been a lot of work done to try and
25 come up with standards that can be measured

1 against. So the industry is already using those
2 in terms of ensuring that there's no problems.
3 One other issue has been this issue of
4 salt. The application of soluble salts to soil
5 can cause salt accumulation or buildup in the
6 rooting zones of soils, and/or contamination of
7 groundwater with salts when the salts are leached
8 from the surface soils. A buildup can affect the
9 rooting zone and the capacity of crop to use or
10 absorb water.
11 There is a report here of all the
12 various studies that have been done on this thing,
13 the frequency of salt in different types of hog
14 manures and so on. I'm not going to go into depth
15 on this. Key thing here are strategies to reduce
16 loadings of salt. Manures are extremely variable
17 in salt concentration, varying with the type of
18 manure and ration. Each manure is unique in its
19 composition and the salt content and loadings of
20 salt to soil can only be accurately assessed by
21 analysis. It is most likely that in instances
22 where manures are high in salts, the source of the
23 salt is the water used in cleaning the barns since
24 dietary salt in rations is low.
25 In terms of odours, it's just another

1 section asked to comment on, and I have provided a
2 short paper here on this. The experience in
3 Manitoba has been, and this is based on
4 statistics, that complaints regarding hog
5 operations have been extremely limited. If you
6 look at the chart in figure 1 from the Farm
7 Practices Protection Board, the most vociferous
8 concerns regarding hog operation odours occur long
9 before the facilities are ever built at public
10 hearings held by municipalities as part of the
11 process to grant or deny a development permit.
12 Often the claims made regarding hog operation
13 odours are overstated and not consistent with the
14 experience of rural residents.
15 Farmers, since 1994, have had a
16 provincial publication to follow called the Farm
17 Practices Guidelines for Hog Producers. This is
18 the document that is used by the Farm Practices
19 Board in terms of adjudicating cases of complaint
20 about nuisance odours. In those guidelines, they
21 provide a series of best management practices, and
22 these include manure injection, which
23 significantly or if not entirely removes odours
24 from land application; manure storage covers for
25 various storage structures, and these can be

1 either straw, plastic and so forth; other
2 practices such as shelter belts, basic sanitation,
3 cleanliness, and diet manipulation, manure
4 additives and solid liquid separation, or some new
5 practices that are being developed, or have been
6 developed.
7 Some emerging technologies in terms of
8 dealing with odour are use of biofilters, though
9 unproven yet, anaerobic digestion. It has been
10 around a long time but the basic problem there is
11 actual costs in terms of they are very expensive
12 to build and don't -- they have technical problems
13 in the amount of power they are supposed to
14 generate. Ongoing research has looked at simple
15 things like, for example, using a fine mist of
16 canola oil in a barn reduces the odour from a barn
17 by pushing down the dust. Other ways, they are
18 looking at manipulating the diet of the pig,
19 including dietary supplements to reduce odour
20 production.
21 Land use planning. This is one of the
22 most successful methods of reducing odour impacts
23 on neighbours, by having appropriate separation
24 distances. And Peter has already talked about
25 that in some lengths and how the municipalities

1 are using that.
2 Then we talk about Farm Practices
3 Protection Act and how it operates. Since its
4 inception, they've had 75 complaints of which 49
5 were regarding hog odour. And then we outline how
6 they were addressed; 37 of these, the hog
7 operations were ordered to modify their practices
8 to reduce the odour emissions. And essentially
9 those were the application of covers.
10 In terms of some of the myths and
11 realities, I think one of the key things is, based
12 upon the evidence that the Farm Practices Board
13 has had, they've had less than four complaints per
14 year regarding hog odour. Virtually all of the
15 hog odour complaints have been resolved by the
16 installation of a cover on the manure storage
17 structure.
18 Why do these operations remain
19 controversial? There's all the various claims and
20 myths. These include like hog odours are
21 unbearable, they lower property values,
22 concentration of barns in local area, mega
23 corporate barns, traditional family farms put out
24 of business.
25 Odour perception is a very complex

1 issue. The primary properties of odour, as
2 perceived by humans, are the frequency of
3 exposure, the intensity, the duration, and the
4 offensiveness. However, the science of measuring
5 odour is crude at present. Although there have
6 been some advances made in terms of some stuff at
7 the University of Manitoba, for example,
8 characterizing offensiveness is a difficult
9 matter, and scientific progress is extremely
10 limited on this thing because people have
11 different emotional and physiological responses to
12 odours, in terms of the unpleasantness, the
13 intermittent nature, the learned response to an
14 odour and so forth. And there's been some studies
15 done on this. For example, we show one here that
16 says the levels of dust, endotoxins and microbial
17 DNA 600 metres downwind from a hog barn are the
18 same as the levels two and one half kilometres
19 upwind from the barn. And that was by Cleave and
20 associates. DGH Engineering has done a study on
21 residents in an area. They surveyed 1,250
22 residents in around 50 hog barns. Seventy-five
23 per cent of the neighbours surrounding the hog
24 operations reported that odours had not caused
25 them to change any of their outdoor activities

1 within the previous 12 months. The size and
2 number of operations find little impact on the
3 perception of odour. The neighbour's perceptions
4 appear to be based more on general opinion than
5 specific observations.
6 The reality of the experience of the
7 hog industry is very different from the myths
8 propagated by opponents to the hog industry. Most
9 hog farmers are very sensitive to the
10 environmental issues surrounding their operation.
11 The vast majority of hog farmers run well-managed
12 operations that meet or exceed the standards
13 published in the provincial guidelines. For those
14 who don't follow the rules, the neighbours have
15 recourse to the Farm Practices Protection Board.
16 The experience of this board over the past 13
17 years confirms that the Manitoba industry has
18 established an exemplary standard of performance.
19 And then I have put up a chart here,
20 because sometimes it has asked, like, how would we
21 regulate odours? In other words, the same way we
22 regulate nutrients in the environment. This is to
23 illustrate the complexity of the production
24 process and where gases and odours and so on can
25 occur in that process.

1 We were asked to comment on disease
2 and disease transmission.
3 MR. MOTHERAL: I have a question on
4 emerging technologies. We were made aware in one
5 of our several meetings we've had preceding these
6 hearings on separating the liquid and the dry
7 matter with centrifuge. Have you got information
8 on that at all, too?
9 MR. DICKSON: I haven't provided a
10 detailed summation of all the technologies that
11 are available. There is a host of them, various
12 systems that have been adapted from municipal
13 treatment systems. There's probably 200 chemical
14 bag-in-the-tank things that people have proposed,
15 all from coal tar to Jerusalem artichoke and so
16 forth. The industry uses an organization called
17 the Manitoba Manure Management Initiative which
18 attempts to try and sort out which technologies
19 might actually work on the farm. Companies are
20 constantly trying different technologies. I can
21 get you more information on a specific one.
22 MR. MOTHERAL: I think we would like
23 more because it's probably a major issue we need
24 to look into.
25 MR. DICKSON: For example, separation

1 technologies, there's various methods. You can
2 have screens and so forth, you can have
3 centrifugal systems, you can have even simple
4 things like letting the first cell of the storage
5 facility fill up and let the liquid drain into the
6 second cell, pump that out, over three or four
7 years later, use a backhoe or a screw auger of
8 some description, and just simply take solids in
9 the first cell out, and then dry them down and
10 spread them. There's a variety of means of
11 handling, separating solids.
12 MR. MOTHERAL: I just noticed it
13 wasn't in your presentation.
14 MR. DICKSON: I didn't try to cover
15 off all the technologies. We'd have a book that
16 would be five pages, I mean five encyclopedias
17 long because there are pros and cons to all of
18 them. The big thing in a lot of them is just the
19 shear cost, though; can they get a simple
20 technology done at a price that will make sense in
21 terms of the value of the nutrient or the odour
22 issue that you're dealing with.
23 MR. MOTHERAL: Thank you.
24 MR. DICKSON: Diseases is disease
25 transmission. I talk here about environmentally

1 controlled barns. The reason we had these
2 developed was to reduce the risk of bacterial,
3 viral and protozoan infections in the animals.
4 And the animals were also protected against biting
5 insects such as mosquitos, irritation and disease
6 issues associated with flies and other insects.
7 The animals are kept cooler in summer and warmer
8 in winter. And for example, you get high abortion
9 rates if sows are sunburned, you get nipple loss
10 due to frost bite, and a whole variety of other
11 ravages of weather. These are all eliminated by
12 using environmentally controlled barns. And even
13 inside the barn, housing practices have improved
14 dramatically in the last 20 years. The key thing
15 here is we separate the animals away from the
16 manure. And this drastically improves their
17 health status. By improving their health status,
18 that means you have less need for medication. For
19 example, the sows, you improve food safety from
20 the human perspective, and you also improve the
21 animal comfort and you have fewer sick animals.
22 The next stage we moved to was this
23 multiple site production. And by segregating
24 animals by their different ages, you can use
25 different management strategies for handling

1 manure. This has a major impact on the health
2 status of the animals and once again improves food
3 safety. And I put a description in of how to go
4 about that. Better nutritional procedures
5 enhances the strength and well-being of the animal
6 but it also reduces wasted nutrients.
7 Biosecurity, well fed, comfortably
8 housed animals in a well-protected environment
9 will remain healthy if we practice sound
10 biosecurity. And that is things like keeping
11 other animals out of the barn, staff have to
12 shower and so forth in and out, and we use
13 biocontainer methods related to manure and
14 by-products and so on.
15 In terms of herd health programs, if
16 you have a controlled herd health status, then
17 other technologies can be applied to improve
18 animal health and well-being. And that's things
19 like vaccines and so forth. These play a key role
20 in reducing the susceptibility of animals to
21 disease. As a result of indoor animal housing,
22 disease such a leptospirosis, cryptosporidiosis
23 and giardia -- these are big words for me -- are
24 virtually non-existent in modern swine facilities.
25 Diseases such as salmonella are clinically rare

1 and managed through proper nutrition, sanitation
2 and pig flow.
3 In terms of manure, by practicing the
4 guidelines set out in the Farm Practices
5 Guidelines for Hog Producers, the province says
6 these prevent illness occurring with humans,
7 through maintaining good personal hygiene, hand
8 washing; selecting an appropriate site according
9 to the setback distances and other criteria;
10 handle and store and apply manure according to the
11 guidelines, and avoid water pollution by adhering
12 to environmental regulations. This is in terms of
13 preventing any infectious disease from
14 transferring between animals and humans. And the
15 statement in the book is,
16 "When these Farm Practices are
17 followed, the risk to public health
18 from manure handling operations or
19 manure storage is low."
20 In terms of the human/animal interaction, any
21 potential to human health is handled by the
22 current food inspection system. Local
23 veterinarians monitor farms constantly. And we
24 have a program in place called the Canadian
25 Quality Assurance Program to do that. Provincial

1 veterinary officers and public health authorities
2 are also involved in ensuring that the risk of a
3 zoonotic disease transfer from animal to human is
4 minimal. The key thing here is the swine industry
5 is dynamic. It is very aware of the need for
6 public confidence in its product. It has always
7 endeavoured to be proactive when it comes to new
8 technologies that will improve health and welfare
9 of the animals. Animal health and disease control
10 is important not just to the economic viability of
11 a production facility, but also the quality of the
12 product produced and welfare of the animals that
13 produce them.
14 And we were asked to make some of
15 comments on climate change. And we provided some
16 details here about the impact of both agriculture
17 and the pork industry in Canada and the pork
18 industry and agriculture here in Manitoba. The
19 key point, the pork industry contributes in a
20 small way to the causes of climate change by its
21 emissions of greenhouse gases, but these effects
22 are mitigated by a large extent by the
23 displacement of artificial fertilizers which would
24 require enormous amounts of natural gas to
25 produce. And by mitigation, I mean we supply

1 organic fertilizer from manure.
2 For example, on table 1, a
3 contribution to greenhouse gases from agriculture
4 from all sectors is 7.24 per cent. Where do these
5 greenhouse gases come from? They are enteric
6 fermentation by domestic animals, manure
7 management, fertilizer application and crop
8 production.
9 There's been an increase in greenhouse
10 gases overall from agriculture resulting from the
11 expansion of beef cattle, swine, poultry, as well
12 as an increase in the use of synthetic nitrogen
13 fertilizers.
14 And on table 2, we point out the
15 relative Canadian pork industry greenhouse gas
16 emissions, Manitoba is responsible for 16 per cent
17 of Canadian contribution from hogs.
18 In terms of Manitoba pork industry, it
19 represented 9 per cent of the total Manitoba
20 greenhouse gas emissions and 2.9 per cent of the
21 total provincial greenhouse gas emissions. In
22 other words, a very, very small sector.
23 We talk about some of the strategies
24 that the industry is adopting. The key ones we
25 are focusing on are methane, and we talk a little

1 bit about -- you can put covers on the storage
2 facility, you can have a major impact on how much
3 methane comes off. Feeding efficiencies, feed
4 conversion rates and so forth, anaerobic digesters
5 could be another way of doing it. Even the
6 application of manure in terms of how much water
7 is in soil and time of year you apply it. The
8 other one is nitrous oxide. And that contributes
9 28 per cent of the greenhouse gas emissions, and
10 we have a description in there of how that works
11 and where they come from.
12 In terms of overall conclusions, the
13 Manitoba pork industry as of 2004, represented 3
14 per cent of the total Manitoba greenhouse gas
15 emissions profile. It's unlikely that the
16 industry's contribution to Manitoba greenhouse
17 emissions will increase. Even if there was an
18 increase in the Manitoba pork herd, new management
19 practice and technology adoption will offset
20 potential increases in greenhouse emissions. And
21 I won't talk any more about that.
22 Now, we were asked to provide some
23 comments on environmental liability. We asked our
24 legal firm to provide that. And it's really more
25 of a technical paper, and I have included all of

1 his remarks. And there's a qualifier, as you
2 mentioned earlier, about lawyers and what they say
3 and things. So I provided that.
4 Essentially, environmental liability
5 arises from three sources, from statute and
6 regulations, by virtue of an action taken by third
7 party, and also pursuant to the contract between
8 parties to a commercial arrangement. And so we
9 talk about the statutory liability and the
10 provincial statutory requirements, all the various
11 pieces of legislation. The Environment Act has
12 something in it, in manure management regulation.
13 In fact, we provide quite a bit of detail in here
14 about that. And how there's various steps to deal
15 with the issue of who might be responsible for
16 liability. We talk about the Groundwater Well
17 Act. It has a section in there. The Dangerous
18 Goods and handling and transportation have
19 something in there about liability. There are
20 Federal statutory requirements, essentially they
21 arise under the Fisheries Act. And because under
22 Canadian Constitution, the environment isn't
23 addressed as a separate piece of legislation, and
24 so it's addressed through other jurisdiction areas
25 such as the Fisheries Act. And then we have

1 common torte liabilities and then contractual
2 liability and then some concluding comments. So
3 I'm not going to go into that detail.
4 THE CHAIRMAN: Just on that note, Mr.
5 Dickson, among the concerns that we have had about
6 environmental liability is decommissioning, or who
7 is responsible if an operator, for whatever
8 reason, just walks away, he goes bankrupt or he
9 dies or just walks away from the operation, who is
10 responsible to clean up anything that's left,
11 particularly if he or she leaves a large holding
12 facility still full?
13 MR. DICKSON: I think the phrase here
14 is, if you look at the conclusion, he provides,
15 "In the context of a hog operation,
16 those persons who are potentially
17 liable for environmental damages
18 include: The person responsible for
19 bringing the hazardous substance on to
20 the contaminated land; the owner of
21 the contaminated land; the occupier of
22 the contaminated land (including a
23 tenant); the person who owns or has
24 possession, charge or control of the
25 dangerous goods or contaminants; and

1 the 'operator' (as defined in that
2 regulation)."
3 And my understanding is, a lot of this is
4 discovered as we get into it. In terms of actual
5 decommission, and the practical experience is, for
6 example, if a hog barn goes bankrupt and is taken
7 over by a bank, the bank ensures that the property
8 is a state for sale. It is in their best interest
9 to empty the manure out of the storage facility,
10 have it applied to the land as per the
11 regulations, and they want to sell it as a going
12 operation. In other words, they want the storage
13 facility to work properly.
14 THE CHAIRMAN: Is it a current
15 requirement to have a decommissioning plan when a
16 person applies for a storage facility?
17 MR. DICKSON: It is spelled out in the
18 environment regulations in 6.21, and I will read
19 it out. Decommissioning a manure storage
20 facility.
21 "If livestock production in an
22 agricultural operation with a manure
23 storage facility is discontinued or a
24 manure storage facility is not in
25 active service for more than one year,

1 the operator shall, without delay,
2 inform the director in writing ,(a)
3 how the operator will maintain the
4 structural integrity of the facility
5 until he or she returns it to active
6 service; or (b), how and when the
7 operator intends to decommission the
8 facility."
9 And I spell that out actually in the preceding
10 section.
11 THE CHAIRMAN: That's fair. Thank
12 you.
13 MR. DICKSON: If you want, I can read
14 them out.
15 THE CHAIRMAN: No.
16 MR. DICKSON: All right. One of the
17 sections was approaches in other jurisdictions.
18 We didn't have a lot of time here to go through a
19 detailed review of the legislated and regulatory
20 approaches taken by other governments in Canada,
21 U.S. or Europe. There is a plethora of this stuff
22 around. And our best sense is after meeting with
23 a lot of official investigation the midwest United
24 States, in the U.S., like Iowa, Minnesota, which
25 are major hog producing areas, other provinces

1 like Ontario and Quebec, a number of our members
2 are European immigrants or we've met with European
3 delegations and so on. Manitoba, our view is
4 Manitoba is at the forefront of environmental
5 regulations pertaining to the livestock industry.
6 That's our basic feel on this thing.
7 And the one thing we would suggest to
8 the Commission, you will probably be exploring
9 other jurisdictions, the devil is in the details.
10 We provide some examples here. For example, in
11 Alberta, their porosity rate in their earthen
12 manure storage structures is 10 times different
13 than ours. In the U.S., they use a phosphorus
14 index model which is based on the concept of
15 nutrient losses arising from summer downpours.
16 Our nutrient loss is surface run-off in
17 springtime. Complex odour models are used in
18 Ontario for siting. And our feeling is, based on
19 discussion with a lot of people, they are very
20 impractical. The concept of plumes is challenging
21 from an engineering perspective, if it actually
22 exists. In Quebec, their basic problem is they
23 import a lot more grain than they produce, so they
24 are importing more nutrients, so they have a
25 problem. How are they going to deal with

1 phosphorous and things like that? Nitrogen, they
2 can blow off to some extent, but phosphorus is a
3 problem, and other nutrients that don't change,
4 they don't volatilize. In Saskatchewan, they may
5 have a manure management plan but only when the
6 barn is in its first year of operation. After
7 that, there's no annual requirement like they do
8 here in Manitoba. And then lowering of thresholds
9 is another thing that comes up. Like, people say,
10 what happens when we get to 100 animal units or
11 something? Well, that's fine, it just means you
12 are going to bring in more small farms that have
13 to come under the thresholds that some of the
14 bigger operations have to deal with. And is there
15 enforcement? Yes, there is. And look at the
16 statistics provided by Manitoba Conservation. We
17 provided a little graph here. And it would seem
18 to us that they are being enforced, and the
19 infractions seem to be declining.
20 THE CHAIRMAN: Just on that,
21 Mr. Dickson, as you know, one of the terms of
22 reference from the Minister asked to us
23 specifically look into that, so I thank you for
24 what you've done here. We will be looking into it
25 somewhat extensively, and we will share the final

1 results with you. And we'd certainly invite your
2 comment on that.
3 MR. DICKSON: We have a bit more time
4 now, after today's hearing, that we will spend
5 more time trying to bring up, or do some more
6 research in the area of what other jurisdictions
7 are doing.
8 THE CHAIRMAN: Good.
9 MR. DICKSON: I mean, the trouble is
10 it changes with time, so some of the information
11 is it's not as easily available as you might
12 think.
13 In terms of the future of the
14 industry, when we get back into sustainable
15 development, you get into this balance between
16 economic development, social development and
17 environmental concerns. And we're trying to
18 address here, where do we think the industry might
19 grow or might shrink? What is the sustainable
20 model for the province?
21 And before we start, in terms of the
22 agricultural economy, I want to point out the hog
23 industry is an integral part of the agricultural
24 economy and has a huge fixed investment in
25 buildings and facilities, and these will continue

1 to provide a strong base of economic activity in
2 many parts of the province.
3 In terms of studies, in terms of
4 economic impact of the industry, there was one
5 done in 2003 by the University of Manitoba under
6 Dr. Jim McMillan. And he looked at eight
7 municipalities in central Manitoba, Dufferin,
8 Macdonald, Montcalm, Morris, Roland, Stanley and
9 Thompson. These had 196 hog operations producing
10 about two million pigs. They had an estimated
11 value of $105 million at the farm gate.
12 Now, a whole variety of statistics
13 came out of this thing in terms of paid income in
14 the area was $10 million and so forth, property
15 taxes, it is a very complex study. Hog production
16 in the region resulted more than $267 million of
17 goods and services at the provincial level. Then
18 they used various multiplier numbers and so on to
19 try to get the knock-on effects within the economy
20 of that production. And it's estimated that 2,779
21 person years of employment were generated. And
22 one of the rules of thumb that came out of the
23 study was for every 606 hogs marketed, there's an
24 additional job created in the provincial economy
25 in some way.

1 We also encourage the Commission to
2 look at anecdotal evidence when you go around and
3 hold your public hearings. So we provide some
4 examples here. If you go to the village, or the
5 Municipality of LaBroquerie, you are going to find
6 it's been transformed by the growth of the hog
7 barns and feed mills in the area. If you go and
8 look at the northeast part of the Interlake, I
9 mean, this was facing severe economic challenges
10 because the railway system was being abandoned,
11 the elevator system was being abandoned or closed.
12 And yet it's now a thriving community in the Town
13 of Arborg. They have got two feed mills. There
14 is modern hog barns in the area that utilize the
15 local feed grains in area, which is reducing its
16 dependence on artificial fertilizers. The same
17 experience has occurred in central Manitoba, for
18 example, in the Town of Killarney in that area.
19 You'll hear from people down there when you go to
20 visit with them. If you go to the City of
21 Steinbach and the surrounding municipalities, I
22 mean, this has been profiled nationally as an area
23 where livestock development has had a major impact
24 on the local economy. And not only has it formed
25 a base -- for example, the credit union has a

1 strong agricultural base from which it can then
2 lend to other industries and develop the community
3 for other economic developments. And a key point
4 about that area is it doesn't have a large amount
5 of annual crop land, and they've always had to
6 rely on livestock for their farm income. The
7 tallest building in Steinbach is the local feed
8 mill last time I looked.
9 General trends in the Manitoba
10 industry. We asked an economist statistician to
11 provide some feedback to us way back in the fall,
12 project the hog sector over the next 10 years for
13 us. The key thing here is we're so dependent on
14 the United States that if you have to look at what
15 the USDA is recommending, or projecting out in
16 terms of economic growth for agriculture, the USDA
17 has looked at population trends in the world, the
18 impact of the U.S. dollar, because a lot of our
19 prices are based on U.S. dollars. What would be
20 the impact of oil price changes? How would that
21 affect agriculture? It looked at world trade and
22 competition and opening markets like Brazil,
23 Argentina, Ukraine, Kazakhstan and so forth. It
24 looked at the meat sector and what's happening in
25 terms of growth in the meat industry, what role

1 will we go in terms of more pork from Brazil and
2 so forth. Food and feed, and this was based in
3 the fall of 2006 and it talked about the demand
4 and changes that are going on in the food industry
5 in the United States in terms of increased demand
6 for meat feeds and so on. China is going to
7 become a net importer of corn. Brazil is rapidly
8 increasing its area of soybeans and it will be a
9 major supplier of soybeans in the world. And then
10 it talks about Kazakhstan.
11 Meat consumption, there's been a large
12 increase in poultry production. What impact will
13 that have on beef consumption and pork
14 consumption -- prices.
15 Then we moved over and looked at the
16 Manitoba pork sector and then we looked at
17 potential markets. And the world pork market is
18 very concentrated. Only 5 per cent of world pork
19 production is traded internationally. China
20 accounts for more than half of known world pork
21 production and consumption. The United States,
22 Canada and the European Union are responsible for
23 over three-quarters of world pork exports. Japan
24 and Russia account for almost half of world pork
25 imports. And the U.S. has now surpassed Canada as

1 the largest pork exporting country. Pork
2 dominates global meat consumption with 46 per cent
3 of market share of all meat protein consumed. The
4 projected 2 per cent annual increase translates
5 into approximately 21 million metric tonnes more
6 of pork needed for 2016, needed by 2016, or 25 to
7 30 million more hogs needed per year globally for
8 the next decade.
9 As pork consumption goes up, Manitoba
10 producers will have the opportunity to capture a
11 share of this larger market, either through the
12 sale of more pigs to the United States or
13 increased pork exports. In other words, we ship
14 the little pigs to the United States, they finish
15 them off and sell overseas.
16 They talk a little about what could be
17 setting us back, animal diseases. But so far we
18 have not had Foot and Mouth Disease. It's not
19 been an issue here. The last case was over 50
20 years ago. There is outbreaks in other parts of
21 the world and that could have a major impact on
22 world trade in pork, for example.
23 THE CHAIRMAN: What about the Wasting
24 Disease that hit Quebec?
25 MR. DICKSON: Sorry?

1 THE CHAIRMAN: The Wasting Disease
2 that hit Quebec?
3 MR. DICKSON: Circovirus is a disease
4 of little pigs and in some into larger pigs. And
5 it's had a major impact in Quebec, it has had a
6 major impact in Ontario. If you look earlier at
7 some the graphs on Ontario and Quebec's
8 production, it has actually dropped in the last
9 year or two. Now, there is new vaccines coming
10 out, they are starting to take hold. And as the
11 herds become more vaccinated and adapt to the
12 disease, it is now getting, to some extent getting
13 under control. Now, the disease is also spreading
14 to the United States, and they are vaccinating the
15 same way we are. So there is that period of
16 adaption as new vaccines come into place. But
17 we're going to see new diseases like this all the
18 time. The livestock industry has diseases. And
19 there are response mechanisms in place to develop
20 things like antibiotics and vaccines and so on to
21 overcome these diseases. The same way we get
22 diseases in humans, we have new vaccines for flu
23 every year and so on. The question is, do we have
24 a system in place to deal with it?
25 In terms of capital, we talked about

1 the availability of capital and, of course,
2 interest rates play a key role in that thing.
3 Will there be more sites for development? A lot
4 of it will depend upon the industry's ability to
5 develop equity capital for retained earnings.
6 We talked a little about feed and
7 what's likely to happen in the feed industry. One
8 key thing here is the Canadian Grain Commission
9 has announced a feed class, which we hope will
10 dramatically allow the development of new feed
11 grains, so that we can get away from this 30 to
12 40 bushels of wheat per acre to 70 to 80 bushels
13 of feed wheat per acre. Not only will it give us
14 a feed cost so we can be competitive with the
15 United States, and B, we should be able to use our
16 nutrients better in terms of cycling them within
17 that production area.
18 Then we talk about prices and what is
19 likely to happen there over 10 years. Net
20 returns, and some of that is based on USDA,
21 slaughter and trade.
22 When we get into this, the last piece
23 here that is probably critical is the four
24 scenarios. And we outline each of those. If the
25 market for 3 and a half to 4 million weanlings

1 continues into the United States, and the Maple
2 Leaf plant goes to two shifts, and our
3 slaughtering capacity remains at 6.5 million, then
4 there's a market for at least 10 million pigs in
5 the province. Go back, remember we talked about
6 9 million pigs as our current production,
7 two-thirds of which would be fed to slaughter,
8 1.5 million more than in 2005. That's over a 10
9 year period.
10 Now, another 10-year projection. If
11 another 2.25 million head plant is built in
12 Manitoba, in 2008, and we increase our
13 slaughtering capacity, and we have to deal with
14 the issue of pigs from Saskatchewan and Alberta
15 being slaughtered here, then this will give a
16 total of 11 million pigs produced in Manitoba, and
17 the markets would have to be found for the extra
18 pork. And as we said earlier, the world demand
19 for pork is increasing at the rate of Canada's
20 total production per year. And if a new plant is
21 built in 2008, but the U.S. border is closed, this
22 is the third scenario, but not to pork, then of
23 course what will happen is weanlings will have to
24 be finished here in Manitoba. And we could get
25 into current levels of 9 million head if

1 additional feeding barns were built. And of
2 course, the fourth scenario is, pork production
3 could decrease because of higher Canadian dollar
4 or U.S. duties or something like that to make the
5 industry unprofitable. And you have to take these
6 projections with a large pinch of salt, to be
7 honest with you.
8 Then we talk about production and
9 various statistics, and how many pigs will be
10 available according to sow numbers and so forth.
11 And then some general comments on new technologies
12 and the adoption process. We have always taken a
13 proactive approach in the industry to deal with
14 environmental issues. And I talk a little here
15 like, for example, nuisance odours. The industry
16 has gone out and, essentially, injects the manure,
17 we have started to put covers on, we are using
18 drag hoses, injection cultivators and so forth.
19 There will be more new technologies flowing out
20 from research and development activities. And as
21 Karl mentioned earlier, our council alone has
22 spent over $6 million on trying to develop those
23 new technologies.
24 We need to move on with dealing with
25 the phosphorus issue as a crop nutrient. We

1 talked to some extent earlier in the various
2 sections. We want to emphasize that we are a very
3 proactive industry. We want to look at using best
4 available control technologies. That's a phrase
5 that is used in the environment industry. We want
6 to form close partnerships with government,
7 regulatory officials, research centres, technology
8 development companies, to create these new
9 technologies. Even government, for example,
10 changing the national regulations on animal feed
11 stuffs will help the industry deal with the issue
12 of phosphorous.
13 In terms of policy tools to be used by
14 government, it is our impression that government
15 policy makers have been primarily focused on
16 developing more and more regulations. We feel
17 this is a limited understanding of the variety of
18 available policy tools. You can still achieve
19 some of the classic objectives of public policy,
20 of efficiency, effectiveness and equality. For
21 example, some years ago the two government
22 departments and the livestock industry created the
23 Livestock Manure Management Initiative, which is a
24 collaborative effort to try to develop new
25 technologies. We feel a renewed effort by

1 provincial departments to invest some research
2 funds matched by industry would play a key role.
3 You could use sales tax exemptions to encourage
4 the adoption of new equipment and services. In
5 the Red River Valley, the smaller producers are
6 going to need significant public assistance to
7 build larger manure structures or they are going
8 to go out of business.
9 Producers need to be educated -- and
10 the crop sector needs to be educated on the value
11 of conserving manure as a source of valuable crop
12 nutrient so that manure becomes a valuable
13 commodity which is sought out by crop producers
14 for its true economic value. Guidelines and
15 publications of general standards are valuable
16 public policy tools, because they clarify the
17 expectations for all stakeholders. Regulations
18 and their enforcement should be viewed as measures
19 of last resort. For example, Manitoba Water
20 Stewardship is actually taking this approach with
21 its new nutrient management regulations that they
22 are setting out. And government officials can
23 guide the tenor of the public debate on
24 environmental issues. For example, this issue of
25 exponential growth. The industry is returned to

1 more normal slow growth rates of two per cent
2 prior to the exceptional growth rate in the mid
3 1990s. The growth of the hog industry in
4 Manitoba, in terms of actual production of animal
5 weights, has been modest. And I put a little
6 comparison in here. In 2006, we might have built
7 10 to 12 barns in the province. In Iowa, they
8 built 290 barns last year.
9 Summary remarks. Our feeling is
10 there's been a plethora of legislation,
11 regulation, public reviews, consultations, reports
12 and new government agencies, we list all these out
13 over the past 10 years. It is our view that
14 successful provincial governments have created one
15 of the strictest sets of environmental regulations
16 for the livestock industry in North America, and
17 these have been strictly enforced as evidenced by
18 statistics on the Manitoba Conservation website.
19 It is the role of government to set the rules for
20 the market economy so that entrepreneurs can
21 invest and create new businesses and employ people
22 in production of goods and services. The hog
23 industry is a slow but steady growth industry
24 which is ideally suited for Manitoba. We can
25 provide a domestic market for a major part of

1 grain industry, and that in turn will reduce their
2 costs in terms of transportation and elevation
3 costs. We can reduce the dependence of crop
4 growers on synthetic and imported mineral
5 fertilizers. We can reduce the threat of trade
6 action by foreign competitors. We can improve the
7 stability of the meat processing industry, and we
8 can add value by converting grains and oil seeds
9 into pork as a consumer ready product.
10 Manitoba has a world class industry
11 which can deliver final product into some of the
12 most discriminating markets in the world. This is
13 an objective we should embrace with enthusiasm and
14 excitement, by finally developing a thriving
15 sustainable agriculture for generations to come.
16 And that's the end of part one. We'll do part two
17 at the end.
18 THE CHAIRMAN: Thank you very much,
19 Mr. Dickson.
20 MR. YEE: Yes, I have a question. In
21 terms of nutrient management, I noticed your
22 information discussed budgeting nutrients. And in
23 our discussions with Manitoba Conservation, they
24 mentioned this practice is well known and applied
25 to Quebec. But one of the other things that is

1 being done in Quebec is a better assessment of
2 nutrient loading on lands. It's something they
3 were saying is somewhat lacking here in Manitoba.
4 I was just wondering if this is something that the
5 industry is looking into as part of their studies
6 and as part of that better science you discussed
7 earlier on?
8 MR. DICKSON: Well, in Manitoba we
9 have, to some extent, started that process some
10 years ago. If you look at table 9, this is a
11 study done in 2000, on page 436, section 436. I
12 mean, essentially it's trying to attempt
13 developing a balance of phosphorus in a crop
14 reporting area. And the view at the time I think
15 to some extent was driven by the fact that they
16 looked at fertilizer applied, and then the problem
17 was too much manure. But if you flip the argument
18 around, if you focus on manure and then say, well,
19 how can you reduce the amount of fertilizer
20 applied, then we can bring a lot of these regions
21 into balance very, very quickly. In fact, some
22 will remain in a negative position even with
23 artificial fertilizer applied. The same can apply
24 to nitrogen and so forth, we can do these
25 balances.

1 I think we need to reach out beyond
2 looking at municipal boundaries and look at areas
3 as a whole in terms of watersheds and contours of
4 the land, the suitability of different soil types
5 and so forth. And it also has, the technology has
6 to be at a point where an industry can afford it.
7 The new regulations that are being proposed by,
8 brought into place I should say, by Manitoba
9 Conservation, a study done by the University of
10 Manitoba has indicated that it is going to cost
11 anywhere between 18 and $27 million in terms of
12 implementing those over the next 10 years. Well,
13 that money comes out of net returns. It's not
14 simply added on the total cost. So, now in terms
15 of relation to net income, you're talking 18, 25
16 per cent of a producer's net income just to meet
17 the new phosphorus regulation.
18 MR. MAH: Could I just add a point as
19 well relative to nutrients budgets? Because the
20 hog industry is only one component of the
21 livestock sector, and because the livestock sector
22 is only one component of agriculture, because
23 agriculture is only one component of the whole
24 economy, including the urban economy, the onus, or
25 an attempt to try and have an industry single out

1 an exercise to nutrient budgets I think is perhaps
2 an erroneous way to go. We should all be working
3 collectively to ensure that whatever we are
4 contributing is what we're trying to combat as
5 well, we're trying to reduce. I think the onus
6 really is on government, through Manitoba Water
7 Stewardship and Manitoba Conservation, who have
8 the role, responsibility, and expertise to come up
9 with these overall nutrient budgets on watersheds.
10 And I know they are working towards that.
11 MR. DICKSON: As a supplemental too,
12 on table 9, bear in mind that this is all
13 livestock and this is based on the year 2000, and
14 this phytase, for example, is an enzyme that has
15 been in feeds, came in about four or five years
16 ago, so the effects haven't shown up yet on some
17 things.
18 THE CHAIRMAN: Just on phytase, I
19 think you said 60 per cent of operations are using
20 phytase now; is that correct?
21 MR. DICKSON: That's according to
22 industry sources.
23 THE CHAIRMAN: Is it growing, is it
24 going to reach a point where everybody is using
25 it?

1 MR. DICKSON: One would hope so. For
2 some on farm feed mills, it will take a little
3 longer to adopt the technology.
4 MR. MOTHERAL: One comment on, this
5 comes as being a former municipal councillor.
6 When you say the Red River Valley needs
7 significant public assistance, and I haven't read
8 the whole thing, is that in your earthen storages?
9 MR. DICKSON: The new regulations that
10 have been adopted in November under manure
11 management regulations are going to be banning the
12 winter spreading of manure for all operations.
13 And currently those under 300, 400 animal units
14 are excluded. Those operations are going to have
15 a dramatic problem because they carry 30 to 60
16 days storage capacity. So, I mean, Conservation
17 is well aware of this, and the Minister has
18 indicated that there will be public funding of
19 some form forthcoming in the, maybe the new
20 budget, we don't know.
21 MR. MOTHERAL: And that takes in the
22 biggest percentage of the hog enterprise in
23 Manitoba?
24 MR. DICKSON: It's a designated area.
25 That's where it's being banned. Other parts of

1 the province can still carry on with their
2 spreading.
3 MR. MOTHERAL: Is that designated area
4 where they are prone to flooding?
5 MR. DICKSON: It's bigger than the
6 flooded area.
7 MR. MOTHERAL: It is larger than the
8 flooded area?
9 MR. DICKSON: In fact, it goes north
10 of Woodlands, parts of Selkirk, over to
11 Beausejour.
12 MR. MOTHERAL: I think I had that and
13 I have just forgotten. Thank you.
14 THE CHAIRMAN: Well, thank you very
15 much for your presentation here this afternoon.
16 Yes, Mr. Dickson?
17 MR. DICKSON: Our presentation will be
18 available on our website tonight, or first thing
19 tomorrow morning, and including the Powerpoint
20 presentation as well.
21 THE CHAIRMAN: Thank you. So thank
22 you very much for your presentation this
23 afternoon. We'll take a break for about 15
24 minutes, and then we'll come back with a group of
25 environmental organizations. Thank you.

1

2 (PROCEEDINGS RECESSED AT 3:17 P.M.

3 AND RECONVENED AT 3:36 P.M.)

4

5

6 THE CHAIRMAN: Could we come back to

7 order, please? We have a busy agenda. We have

8 another presentation that will take approximately

9 two hours. We will run straight through. We were

10 scheduled to take a supper break at 5, but we will

11 take it at about 5:30. It may mean a slight delay

12 in starting after supper, but hopefully not.

13 Mr. Koroluk, is your group ready to

14 proceed?

15 MR. KOROLUK: Ready as we ever will

16 be.

17 THE CHAIRMAN: Can I ask each of you

18 to introduce yourselves for the record? And then

19 I will ask Kathy Johnson, the Commission

20 secretary, to administer the oath?

21 MR. KOROLUK: Glen Koroluk.

22 MR. TAIT: Fred Tait.

23 MS. PRYZNER: Ruth Pryzner.

24 MS. BURNS: Vicki Burns.

25 MR. HARRISON: Bill Harrison.

1 G. KOROLUK, F. TAIT, R. PRYZNER, V. BURNS and
2 B. HARRISON, having been sworn in, present as
3 follows:
4 THE CHAIRMAN: Thank you. You may
5 proceed.
6 G. KOROLUK, representing Beyond Factory Farming
7 Coalition
8 MR. KOROLUK: Thank you, Mr. Chair,
9 for this opportunity to follow up the Pork Council
10 on the opening day of the second round of public
11 meetings.
12 I just want to express our concern
13 from months ago. And no fault of the Commission
14 or the chair, but the Minister of Conservation did
15 give you a Terms of Reference that really didn't
16 allow us to have a full-blown environmental Clean
17 Environment Commission hearing, which would have
18 allowed us to ask questions of the hog industry
19 and cross-examine, et cetera, but we will work
20 with what's given to us.
21 THE CHAIRMAN: Well, I don't agree
22 with you, but I agree that we will work with
23 what's given to us.
24 MR. KOROLUK: Okay. Just a bit of a
25 different take on issues here. It's good to see

1 how big the industry is in Manitoba, in Canada.
2 As we see in 2006, Manitoba is the leader right
3 now in the country in terms of hogs marketed in
4 Canada. We are at 8.8 million hogs a year,
5 according to Stats Canada. And correctly pointed
6 out from the previous presentation, we surpassed
7 Ontario and Quebec. And their numbers are
8 actually going down because of the circo virus.
9 There is another chart that gives sort
10 of the pork powerhouses of 2006 in North America,
11 excluding Quebec. It's a funny thing because a
12 few months ago I asked for a breakdown of the
13 companies in Manitoba and how much they produce,
14 and I was told to get the Pork Powerhouse magazine
15 of successful farming. But it gives us an idea of
16 who some of the big players are in the continent.
17 Smithfield Foods, of course, is by far the biggest
18 pork producer in the world, actually. Maple Leaf,
19 which is based out of Ontario, but have their
20 major kill plant in Brandon, is Canada's biggest
21 producer. And they probably rank around sixth or
22 seventh in the continent.
23 And, of course, we have got other
24 companies here in the province. Hytek, Puratone
25 Corporation, they have got about 54,000, 46,000

1 sows apiece. And, of course, the Puratone --
2 sorry, the Hytek Corporation, is still interested
3 in building their own slaughterhouse plant here in
4 Winnipeg.
5 A different look at numbers, this is
6 from 2006. It's the average number of pigs on a
7 farm per operation in North America. And it's
8 basically taking the pig census, as you heard
9 earlier, of about three million pigs in Manitoba
10 and divide it by the number of operators. And
11 you'll see that in terms of operation size,
12 Manitoba is ranked second right now in terms of
13 having the largest operations in the continent.
14 North Carolina, by far, they have big operations
15 there and they have got big problems, too.
16 And we know, you know, Quebec has had
17 the moratorium that has been lifted for two years.
18 North Carolina still has a moratorium on new
19 development. And the moratorium here in Manitoba,
20 which we would like to see extended, at least for
21 a couple of years.
22 We talk about the number of
23 operations, and it's an important question.
24 Manitoba government says around 1,400. Stats
25 Canada, where I got that previous chart, says

1 1,250. And this is for the year 2006. And the
2 Pork Council has publicly said: Well, there is
3 851 registered operators now or it may be up to
4 1,000. And why do we want to know how many
5 operators that are out there? Well, it's
6 important to know who is out there. For one, you
7 have to know where these operations are in terms
8 of monitoring, enforcement, inspection.
9 We had, you know, the Manure
10 Management Regulation of 1994 that came into play,
11 but there were a number of operations in place
12 before that. So I don't think we still have a
13 grasp as to who is out there and where these
14 operations are located.
15 It's also important for
16 de-commissioning and post-closure. I mean, if ten
17 years ago we had 2,000 operations and now we have
18 got 1,000, that means there is 1,000 operations
19 out there that should be adequately
20 de-commissioned. And I haven't seen any records
21 of de-commissioning yet in this province, but I
22 could be wrong.
23 And this is just a recent article from
24 the Manitoba Co-operator, which says that: There
25 is 851 pig operations as of March 2006. And then

1 they say: There is approximately 1,000 operations
2 in the province. So it is good to get a grasp of
3 the numbers.
4 I am not going to talk much about the
5 economics in my overview. We will talk about it a
6 bit more later on in the presentation. But this
7 is from a 2001 article in the Farmer's
8 Independence -- or the Co-operator, I should say,
9 where at that time there was 1,650 hog farms in
10 Manitoba. And 82 percent of the hogs that went to
11 market came from 11 percent of the producers.
12 And so it's a tremendous amount of
13 concentration of ownership in terms of size and
14 production capacity. So, you know, if you break
15 it down, yeah, I mean, 180 factory farm operations
16 accounted for $705 million worth of $860 million
17 total for that given year. And we have heard that
18 in 2005 the economic pie is $1 billion. So, you
19 know, maybe 10 percent of the operations account
20 for over 80 percent of the hogs, so it's an issue
21 of concentration.
22 This is from a recent article also
23 talking about the top 10 percent gets 75 percent
24 of the subsidy. And this is U.S. farm subsidies.
25 And, I mean, we have asked for this information in

1 Manitoba and we haven't been able to get it yet.
2 And what we really want to demonstrate is that
3 there are subsidies. There are programs out
4 there. There are income support programs and
5 there are subsidies.
6 Here is Manitoba Finance Fast Facts
7 from 2001 that says:
8 "Annually tax revenue foregone in
9 support of Manitoba farmers,
10 $170.5 million."
11 You know, it's good to support a
12 family farm or a farm operation in times of need,
13 but who is getting -- who is getting these
14 subsidies? Is it these corporate structures, the
15 investment schemes? These are details we need to
16 know. So we have -- this is the information that
17 we have asked for and have yet not been able to
18 get ahold of it.
19 CAISNISA pay-outs to hog operators,
20 loans and lines of credit that are forgiven or
21 outstanding from the Manitoba Agricultural
22 Services Corporation. And we really want to get a
23 gauge as to how much is the general taxpayer
24 supporting our ILOs or who really is receiving the
25 benefits?

1 Whoa, welcome to North Carolina. This
2 is actually Manitoba. And the next few slides
3 will be all from Manitoba. I don't know if you
4 can see this from the back, but this is a hog
5 operation in southeastern Manitoba in June 2002
6 after some heavy rains. We've got run-off
7 problems. We've got a full lagoon.
8 Same time, same area, different set of
9 operations. You can see all of the standing water
10 in the fields where the manure will be applied or
11 has been applied. This one is interesting because
12 it is in June. And there is standing water all
13 over the place and the lagoon is empty already, or
14 near empty, so we know that the manure has gone
15 onto the fields. You can see the river in the
16 forefront of the picture there. The fields are
17 just 100 percent saturated.
18 Again, here are eight barns in the
19 southeast of Manitoba. I guess some of you might
20 remember the big rain where we had six to eight
21 inches in the southeastern part of Manitoba. But
22 some of these barns themselves are washed out.
23 A different view. Here is an
24 above-ground storage container. Again, the fields
25 are saturated. This just gives you a size -- some

1 of the size of these barn structures and lagoons.
2 You can see, you know, Highway 12 in the forefront
3 there and how small the vehicle is.
4 I don't know how many animals would be
5 in this barn, but at least 10,000. And it's
6 forested area. And the forest has been blown out,
7 leveled out, and that's where they have applied
8 the manure.
9 Again, springtime 2001, this is the
10 R.M. of La Broquerie. Saturated fields, spring
11 run-off, full lagoon, just ready to be emptied.
12 Springtime, again after the April 10th
13 period where you can't apply manure. Again the
14 fields are saturated. And this one is empty, so
15 we know that the manure has gone on to the fields
16 that are saturated around there.
17 Above-ground storage field. The
18 entire area is saturated. And the storage area is
19 brim to the top, probably got a foot left there.
20 And where are they going to put that liquid
21 manure?
22 Another example, an eight barn
23 operation. These are probably finishing barns
24 which hold about 2,000 pigs per barn.
25 Mortality. This is no doubt an

1 accident, but we're trying to find out what the
2 mortality rate of the industry is in this
3 province. Finding proper places to deal with
4 mortality is an issue in Manitoba.
5 A ditch along a highway in the
6 Interlake. The field to the left was manure
7 applied to it. And you can see the algae growth
8 in the ditch. You get a rainfall, that ends up in
9 the lake, Lake Winnipeg.
10 Another example, this is from western
11 Manitoba, of a drainage ditch in a field to get
12 water running off a field in times of spring melt
13 and heavy rainfall. And these fields are manured.
14 And there is a hog operation on this
15 section of land. And it eventually gets off the
16 fields and ends up in a drainage ditch. And then
17 from the ditch to the stream, from the stream to
18 the river.
19 A saturated field again. You can see
20 the algae growth. And again this ends up in the
21 ditch and drainage system. And this is also taken
22 in the Interlake. Just to give you an idea of the
23 size and scope, this is half a picture. If you go
24 to the right side of this picture, and one of
25 these days I will tape them together, there will

1 be 16 barns on one section of land. You know,
2 with 2,000 pigs per barn, that is 32,000 pigs on a
3 section of land at a given time. Again, the place
4 is just saturated. And, you know, the manure has
5 nothing else to do but to mobilize into the
6 aquatic environment. This is a leaky pipe that
7 you can see between the lagoon and the barn.
8 This one is interesting. We think
9 it's, you know, an operator dumping its truck on
10 the snow in the winter time. And you can see the
11 burn-outs. So, you know, you just dump it and
12 move a bit. And there is a whole bunch of them
13 there, burn-outs on the ground. And this is all
14 overhead shots, obviously. Years ago we had an
15 outfit called hog watch. What was it called?
16 MR. TAIT: Hog Air.
17 MR. KOROLUK: Hog Air.
18 So a lot of talk about surface water,
19 contamination, nutrient build-up in Lake Winnipeg,
20 too much phosphorous, et cetera. That's just one
21 issue, just one. I wouldn't call it small. But
22 there is a danger that if you focus on one issue
23 too much, there are other issue impacts that we
24 might let slip away.
25 And back in 1999, the government, in

1 its wisdom, did a sample, a groundwater sampling
2 regime of close to 1,000 wells. I think they took
3 a sample per township. And the results, there was
4 never any report printed up. In fact, we don't
5 know what happened to the report. We were
6 promised there was to be one.
7 But it showed that 32 percent of the
8 wells sampled exceeded the Canadian Drinking Water
9 Quality Guidelines of zero total coliform
10 bacteria. And 16 percent of those wells tested
11 also exceeded the Drinking Water Guidelines of 10
12 milligrams per litre of nitrate, and that was back
13 in 1999. So in areas, environmentally susceptible
14 areas, you know, contamination of the aquifers is
15 a big concern. And we can see that we have got
16 problems in Manitoba. Those are high percentages.
17 So after seeing that report, I
18 actually asked -- went through Freedom of
19 Information and requested all of the monitoring
20 wells installed for all of the lagoons, livestock
21 lagoons, in the province. I can't remember what
22 the number was. I think it was 400, 500 different
23 wells installed. And it took me almost four, four
24 years to get the data. The Freedom of Information
25 isn't the greatest in this province.

1 But I gave the data to Dr. Bill Paton.
2 And he looked at the different parameters. And we
3 didn't get the information properly, but he
4 estimates that over half of the manure storage
5 facilities show evidence of groundwater
6 contamination. And this is data that went up to
7 2005. And we would also like to get an update of
8 this information. We have asked for it, too. And
9 some analysis of it, independent analysis.
10 So what does all of this mean? We are
11 talking about nutrients. We are talking about
12 groundwater contamination. We are talking about
13 Lake Winnipeg nitrification.
14 But there is also other stuff in that
15 manure. And the feed has low dosages of
16 antibiotics. Antibiotics are used to cure, you
17 know, disease, treat an animal. But it is also
18 added, at the sub-therapeutic level, as a growth
19 promotant. And, you know, not all of this is
20 absorbed by the animal. And it is excreted, much
21 like the M and P, into the waste. And that ends
22 up into our environment, too.
23 And, you know, we are not even doing
24 this research here in Manitoba. And I have got a
25 stack about six inches tall of stuff that I will

1 give to you and stuff that is a peer reviewed in
2 the U.S. And I mean, this is real issue that we
3 are not dealing with.
4 And in the U.S., well, the American
5 Medical Association passed a resolution in 2001
6 that the A.M.A. is opposed to the use of
7 anti-microbials at non-therapeutic levels in
8 agriculture, or as pesticides or growth promoters,
9 and urges that non-therapeutic use in animals of
10 anti-microbials, that are also used in humans,
11 should be terminated or phased out based on
12 scientifically sound risk assessment. And, I
13 mean, the A.M.A. is quite a reputable
14 organization. So this is an emerging issue that
15 we have to deal with.
16 So just to sum up some of those
17 pictures that we saw, some of us, a few of us,
18 have asked for manure management plans that have
19 been filed. We have asked for soil test data. We
20 have asked for water quality data. We have
21 installed groundwater monitoring wells,
22 groundwater data of private wells. A list of
23 ingredients in the feed. An update of the
24 nutrient loading in Lake Winnipeg going into 2006.
25 Inspection records of permitted ILOs. Actual

1 water usage data of metered ILOs. Pig mortality
2 rates. So these requests are still outstanding.
3 And we want to point out that in order to do an
4 investigation, we really need to get real data,
5 and the data is there. There is no sense in us
6 bouncing stuff back and forth. We really want to
7 get that data and see what is happening on the
8 ground.
9 A couple more pictures here. A barn
10 in western Manitoba taken in winter time. But it
11 sort of gives you an idea that emissions are
12 coming off three locations from an operation.
13 From the lagoon, and if you put a synthetic cover,
14 you might deal with it. Emissions come from when
15 you apply the manure on to the fields. And they
16 are trying to deal with that problem by doing more
17 injections. But emissions also come from the
18 manure themselves, the stacks.
19 This is a large barn. It probably
20 holds 10,000 animals. And as has been explained,
21 I mean, this is an odour. This is hydrogen
22 sulfide. This is ammonia. And these are toxins.
23 And you can see the drift, depending on the
24 climatic situation at this given place, at this
25 given time.

1 A different shot. You can see the
2 drift. I don't know if you can see it in the
3 back. But this air pollution is going on to
4 someone else's property. And you can see the
5 drift. I don't know if you can see it or not, but
6 it's down low on the ground. Maybe there is some
7 sort of inversion, air inversion happening here in
8 the vicinity. But this is not odour. This is air
9 pollution escaping the property and going on to
10 somebody else's property. We know this. We have
11 measured these constituents. We've got rules and
12 laws in the oil and gas industry that says you
13 can't have over this amount of hydrogen sulfide
14 escaping from your -- from your property. Why is
15 agriculture exempt from that?
16 And in Iowa, which has been mentioned,
17 is the leading pork producer in North America in
18 terms of numbers. And in 2002 -- well, in 2000
19 they put together 40 of the top scientists in the
20 region to look at air quality issues of
21 Concentrated Animal Feeding Operations, CAFOs. We
22 call them ILOs here. They call them CAFOs in the
23 U.S. And the 40 scientists came out with a
24 consensus report. In response to question 2 -- I
25 think there were only three main responses to

1 three main question. But by consensus of the
2 entire study group, the following substances
3 should be considered for regulatory action: 1.
4 Hydrogen sulfide, 2. Ammonia, 3. Odours. So
5 they are recommending that Iowa should move
6 forward and start regulating the toxic substances
7 coming out of these operations from the barns,
8 from the lagoons and from applying the manure on
9 to the land. They further say:
10 "Hydrogen sulfide and ammonia are
11 recognized degradation products of
12 animal manure and urine. Both of
13 these gases have been measured in the
14 general vicinity of livestock
15 operations of concentrations of
16 potential health concerns for rural
17 residents under prolonged exposure."
18 And in Canada, the Canadian Medical Association,
19 back in 2003 of April, at their Annual General
20 Meeting, were also concerned about the spread of
21 intensive livestock operations. And they passed a
22 resolution that:
23 "The C.M.A. expresses concern with
24 regard to the risk of public health in
25 rural areas as presented by the

1 development of industrial hog farms.
2 And that the C.M.A. urge the federal,
3 provincial and territorial governments
4 for a moratorium on the expansion of
5 the hog industry until scientific data
6 on the attendant health risks are
7 known."
8 So from these slides, just to sum up the
9 information requests that we have outstanding and
10 hope to get in the future in order to carry on a
11 proper investigation, I mean, we want an idea of
12 what the injury and illness rates are of hog barn
13 workers who are exposed to these gases and other
14 workplace and safety areas.
15 We want to get a copy of the relevant
16 in-house and external studies used to maintain
17 set-back distances. And these studies were
18 mentioned in the provincial report that came out
19 for this review.
20 And we also want a more detailed
21 assessment of the complaints to the Farm Practices
22 Board, not that -- well, some of them were
23 remedied. I mean, we should actually be
24 interviewing some of these complainants and see
25 what is happening. I just want to add that no one

1 knows about the Farm Practices Protection Board
2 and the fact that you also have to pay money to
3 make a complaint.
4 And a bit on climate change and, of
5 course, you know, air emissions. And it was
6 mentioned, you know, that methane and the nitrous
7 oxides contribute to greenhouse gas emissions in
8 Manitoba. And they are on the increase, not the
9 decrease. And agriculture is where the problems
10 are right now.
11 But on the flip side of climate
12 change, because of the production system, and
13 that's what we're really looking at is the
14 production system, it uses a lot of water. And it
15 also -- you know, in terms of climate warming,
16 it's a system that will have some problems in the
17 future. In areas where we will get more extended
18 drought, we will need more water. We will need to
19 find more water for these systems. We also are
20 seeing, which you have seen from some of the
21 slides, that we get these intense thunderstorms,
22 and people relate that to the change in climate
23 warming, too.
24 So if we get, you know, four or five
25 or six inches within two days, I mean, you see the

1 manure escapes the operation and is into the
2 surface water system and groundwater system. So
3 that it's the production system that actually
4 creates the problems here. And here, just
5 recently at the Pork Expo, the Banff Pork Expo,
6 David Sauchin, who is one of the leading climate
7 change researchers out of the University of
8 Regina, is warning the hog industry that water
9 management and conservation will be the key for
10 industry to adapt to climate change. The greatest
11 risk climate change presents is a reduction in the
12 amount, quality and distribution of water supply
13 systems.
14 And just a note, the comment about how
15 much water the pork industry uses, we would
16 actually like to see how much water the pork
17 industry uses. They self-monitor. The facilities
18 that do have metres, they read the metres and hand
19 it into the province. I wish I could do that with
20 my gas bill.
21 But the issue is, and it was pointed
22 out also, that most of the groundwater that they
23 take is from the sub-surface aquifers, and these
24 are the ones that will be impacted the most by
25 drought.

1 And just to finish off here, and we
2 will talk about this a bit more, I mean, the
3 impact of the industry to communities. And here
4 is a story from a couple of years ago. And
5 believe me, I've got tons of these stories. When
6 the industry comes into your community, they bend
7 a lot of arms. In this particular development,
8 Dynamic Pork Corporation, which is a network of
9 substantial financial interests and, you know, it
10 is -- most of these operations are investment
11 schemes. You know, it is not a family farm. I
12 mean, you are an investor. So they are networks.
13 And in this particular case, groups
14 want councillors charged with conflict of
15 interest. And we hear a lot of stories of
16 conflict of interest in the rural parts of
17 Manitoba. We have got conflicts of interest in
18 Winnipeg, too, by the way.
19 So, you know, people get upset and
20 people revolt, and it's been ongoing for years and
21 years and years. And, you know, this is a March
22 in front of the NDP convention a couple of years
23 ago. Close to 150 came out. And you get protests
24 all over the place in Manitoba when you try to set
25 up an operation.

1 And that's my part of the
2 presentation.
3 THE CHAIRMAN: Thank you, Mr. Koroluk.
4 I'm sure, Mr. Koroluk, that if you were able to
5 self-monitor your gas meter that you would be
6 completely honest in your reporting.
7 I do have a couple of questions. You
8 showed us a number of pictures of operations
9 where, as you noted, there was water around the
10 operations and the lagoon appeared to be empty.
11 But do you -- are you able to document that that
12 manure was spread on wet fields?
13 MR. KOROLUK: No, not actual
14 on-the-ground verification. All we can say is,
15 well, this is the date we took it. We know when
16 you are allowed to put the manure on the fields.
17 And you can see a picture that, well, okay, this
18 lagoon is almost empty.
19 THE CHAIRMAN: And then you also
20 showed us a picture of a hog barn with exhaust
21 coming out of stacks on the roof and you referred
22 to this as being toxic. What toxins are in that?
23 We've heard evidence otherwise.
24 MR. KOROLUK: Well, ammonia is
25 classified as a toxic substance under the Canadian

1 Environmental Protection Act.
2 THE CHAIRMAN: How much ammonia is in
3 that exhaust?
4 MR. KOROLUK: How much ammonia? There
5 are studies which I can provide to you in
6 measurements and part per million, for sure, yeah.
7 THE CHAIRMAN: Well, we would
8 appreciate that.
9 MR. KOROLUK: Okay.
10 THE CHAIRMAN: We need solid evidence,
11 not conjecture.
12 MR. KOROLUK: Most of this stuff I
13 have on hand is mostly from the U.S. and it is
14 peer reviewed, like published, in refereed
15 journals.
16 THE CHAIRMAN: Thank you.
17 Mr. Harrison?
18 Bill Harrison, Rural representative for the
19 Provincial NDP Environment Committee
20 MR. HARRISON: Mr. Chair, regarding
21 some of those photographs that were taken during
22 spring flooding, I believe it was. These lagoons
23 were often breached by the water, and that's why
24 the lagoons would appear to be more empty. At
25 times the actual lagoons were washed. And you can

1 see in the actual photographs that they are
2 breached. And there are two streams and I noticed
3 them going right back to the barns. You have to
4 check the photographs closely to verify that.
5 THE CHAIRMAN: Thank you. Next?
6 MR. HARRISON: I would like to get
7 more comfortable here, please.
8 Good day. My name is Bill Harrison.
9 And I am, among other things, a rural
10 representative for the Provincial NDP Environment
11 Committee. And also it is nice to be recognized
12 by the Manitoba Pork Council because I am also Joe
13 citizen. I'm the union window person. I am the
14 NIMBY neighbour. I am that special interest
15 groupie. I am the limited complainer on odour in
16 Manitoba. I am the methodologist. I am a person
17 who happens to live in an area with a rapid
18 increase in the number of mega-hog factories. And
19 I am, first and foremost, a water and an air
20 hugger who is concerned about human health and
21 welfare.
22 I would like to thank the CEC, once
23 again, for hearing from the public and, in
24 particular, from we rural Manitobans on the
25 subject of the environmental sustainability of the

1 hog industry. And you will notice we do not say
2 hog farming, so we have got that right today in
3 Manitoba.
4 I know you have a daunting, but
5 nevertheless valuable task in processing a large
6 amount of information you've been mandated to
7 review. And we hope you will make strong
8 recommendations to the government of the day which
9 will result in real increased protection for our
10 environment and, most importantly, our ground and
11 surface waters and, of course, our people.
12 While I myself have been concerned
13 about environmental issues since attending
14 university in the sixties, I only took up the
15 environmental cause in the year 2000 after living
16 for the previous 28 years in a once pristine
17 valley on the Roseisle Creek in the Pembina Valley
18 foothills west of Carman. Some of you may have
19 been out to that area and cross-countryside skied
20 there and enjoyed the beauty there.
21 Well, my neighbours and I could see
22 the growth of intensive livestock operations,
23 particularly hog production factory barns. I will
24 refer to them as factories because that's what
25 they are. And I'm sorry to see or still hear that

1 people are eating this factory pork because I
2 recommend that it is not the healthiest of foods.
3 I've worked in those barns myself. And, I'm
4 sorry, but I've stopped eating it. Anyway, that's
5 just a personal view.
6 Yes, at the time, much more numerous
7 family farms were, you know, about. But at one
8 time we could see more family farms, rather
9 smaller producers, who now are not there. And my
10 small farm friends who were there have lost a
11 significant portion of their farm income. As
12 noted by the Pork Council here, we saw a reduction
13 in the number of producers and becoming larger
14 producers.
15 And as Glen has mentioned, they are
16 corporate investment. So the small family farmer
17 now has one less bit of income, but the investors,
18 well, they are making money. And that money, that
19 income money which is investment-driven, a lot of
20 it has been leaving our communities, our rural
21 communities.
22 Now, a Hog Watch ad in the June 28,
23 2000 edition of the Winnipeg Free Press put the
24 burr up my backside, as it pointed out then that:
25 "Our province proposed current annual

1 hog production of close to ten million
2 hogs would produce more fecal waste
3 than the entire human population of
4 Canada."
5 And then:
6 "A significant portion of it will wind
7 up in your rivers and ground and
8 ultimately your drinking water."
9
10 And, of course, now we know of pollution, and in
11 particular phosphorous, affecting lakes Winnipeg,
12 Lake Manitoba, Stephenfield Lake, which is a
13 man-made lake near where I live, that feeds
14 thousands of people in the Carman and surrounding
15 area, and who knows yet how many others.
16 These CEC meetings will be of profound
17 historical significance to the environment for our
18 children, our children's children and beyond. The
19 current state of our waterways is screaming for us
20 to help. Denial by the hog industry is not an
21 option. The public has woken up, and that is why
22 we are here today to begin a process to save our
23 water's health and that of those creatures who
24 consume it to sustain their lives.
25 For rural residents and now, in

1 particular, the urban folks of Transcona and St.
2 Vital, and really the whole of Manitoba, this is
3 often a tale of frustration and cynicism born of
4 trying to deal with governments, both municipal
5 and provincial, and the hog industry. Residents
6 are, at best, ignored and, at worse, misled and,
7 yes, lied to by the above mentioned governments
8 and hog industry. I will illustrate that. As
9 well, there has been threats by members of that
10 latter group.
11 My neighbours and my friends support
12 my efforts to defend our environment, but I have
13 seen many give up their struggle since they feel
14 the Department of Conservation, in particular, has
15 failed Manitobans and is often perceived as a
16 promoter of the hog industry. And this is
17 illustrated by members of the now of the pork
18 industry, particularly the Pork Council, who were
19 formerly working for the government, and they have
20 now switched sides. I only wish that this board
21 could recommend that there be a cooling-off period
22 so that when somebody moves from the government,
23 from a position of knowledge, before they can go
24 and work for some industry that they have a
25 particular knowledge in that they have gained at

1 the cost of, you know, our state, that they, you
2 know, have a few years off maybe. You know, it is
3 a conflict of interest, really. They should
4 really give them some time to stay out of the
5 show.
6 Now, the abandonment of Olywest by
7 Olymel and Big Sky Industries, or Big Ski,
8 illustrates the economic uncertainty of the hog
9 industry, at the best of times. Olymel lost
10 $150 million or so in the last few years. And Big
11 Ski is reputed to be 40 percent funded by
12 Saskatchewan taxpayers. So politics enters the
13 sustainable equation, or sustainability equation,
14 as the Saskatchewan government, obviously, does
15 not want to subsidize a slaughter plant in
16 Manitoba, especially when Maple Leaf is closing
17 its plant in Saskatoon. Now, we have seen that
18 because Maple Leaf feels that it is better to be
19 processing here in Canada, and for the Canadian
20 consumer, rather than export it.
21 And lest we forget foreign interests,
22 foreign intervention, rather, when on October 15th
23 of 2004 the U.S. government slapped duties of 13
24 to 15 percent on live hogs shipped to the U.S. for
25 six months in order to protect its own producers.

1 Now, this is the variabilities in the market. It
2 is tough to be a hog processor or a hog producer.
3 And today we have a feed deficit
4 crisis, with the cost of corn skyrocketing in the
5 U.S., because of its demand by the burgeoning
6 ethanol industry. And why should our already
7 suffering grain farmers be expected to grow cheap
8 feed quality grain to make pork producers richer?
9 Yet pigheadedness on the part of the hog industry
10 pursues even more growth problems with all of
11 these dominos falling their way.
12 Now, I'm not totally against the hog
13 industry. I'm not. But there is a limit. There
14 has got to be a limit.
15 But back to my and my own neighbour's
16 own negative experiences with the hog industry and
17 local and provincial governments. Back in the
18 summer of 2000, I attended four livestock
19 stewardship hearings, and then watched in
20 disbelief as the major recommendations in the
21 resultant Finding Common Ground report were
22 ignored by the provincial government. A waste of
23 my time, and many others, and the taxpayers'
24 money. Let's hope today we are not wasting
25 taxpayers' money.

1 Subsequently, my faith in the powers
2 that be was only decreased when Hytek arrived in
3 my neighbourhood. And I see they are here today.
4 An employee of theirs and his brother bought a
5 beautiful piece of land, a quarter section, just
6 under one and a half miles straight south of my
7 home. And just a half mile south of the quiet
8 hamlet of St. Lupicin, well known in Manitoba and
9 beyond for its St. Lupicin Craft Gallery, which
10 provided additional income to the dozen or so
11 artisans and artists who displayed their works
12 there for many years.
13 At the time, six full-time residents
14 and six part-time residents populated the village.
15 Since construction of the 8,000 or more feeder
16 barns, the population is now down to one, and
17 that's in less than three years. The gallery's
18 owner, my good friend, my late friend, Ken
19 Chambers, is dead, due in part to the stress of
20 dealing with the aggressive manager of the
21 Picardie Farm. And, of course, the gallery is
22 closed and the mood of the neighbours is angry to
23 this day.
24 In spite of a promise to cover the
25 manure pit by the proponents before construction

1 began, it only may come to pass because of our
2 recent efforts with the Farm Practices Board this
3 winter, where we did win a decision to have the
4 lagoon covered. But that's not until June, and
5 that is only with straw, even though we
6 specifically asked for a synthetic cover. But, of
7 course, they don't want to spend the money on
8 something that is more effective. Meanwhile, this
9 is another cost to taxpayers because a hog
10 businessman wouldn't live up to his commitment.
11 And so we had to have this meeting, at a great
12 cost again to the taxpayers, and to the people who
13 live in the neighbourhood, of course.
14 Never mind the lie told to us by Water
15 Management in the Conservation Department that
16 these barns would not be built because there was
17 not enough water under the property to support
18 this operation. No, instead they granted a
19 permit, a special permit, to Picardie Farm to pump
20 water via an irrigation-type pipe from the Lyle
21 Creek about two miles away during spring runoff to
22 fill an in-ground storage pit next to their
23 in-ground manure pit. This is sustainability?
24 Meanwhile, I joined the NDP, with the
25 good intention of working with the government to

1 bring improvements to the Planning Act and our
2 Environment Act. It has been a struggle. Our
3 municipal government, government of the R.M. of
4 Lorne, wasted $20,000 on lawyer fees alone
5 fighting its own constituents in the Town of Notre
6 Dame de Lourdes this past summer over a
7 disagreement over the set-backs which we have
8 discussed, or the hog industry presented earlier,
9 that they are so happy with, a disagreement over
10 set-back distances in the R.M.'s new Planning Act.
11 Who were the main witnesses for the R.M.'s lawyer?
12 Why a director of the Manitoba Pork Council and an
13 expert from the Manitoba Department of
14 Agriculture. By the way, the town won this case.
15 And what did this cost the Manitoba taxpayers to
16 have us sit before the planning board? But this
17 is sustainability?
18 Now, a hog factory production
19 proponent in our R.M. at Swan Lake, near Swan Lake
20 Village, or Swan Lake town, I should say, wants to
21 build right on top of the town's aquifer and
22 within one mile of the Swan Lake Band Reserve,
23 angry -- angering both the towns' and reserves'
24 residents. But we will have to wait and see who
25 comes first here, hogs and their few owners or the

1 majority, the human beings who depend on pure
2 water for their health and well-being?
3 In addition, local factory hog
4 producers avoid environmental infraction
5 investigation by spreading and dumping manure in
6 neighbouring ditches and even Roseisle Creek. And
7 there are documents to prove that, though I can't
8 get it anymore because the government has removed
9 it from the internet where they fine people.
10 The environmental inspectors have
11 fined one producer for dumping directly into the
12 Roseisle Creek in the past. And there are other
13 members of the hog industry who have been fined,
14 including, I believe, Elite Swine and one
15 particular Hutterite colony. But anyway, that has
16 happened, it's over with. Now, they do this on
17 weekends because, you know, the environmental
18 inspectors are not on call or in the field, so
19 they can get this done on the weekend. And by the
20 time you get a complaint in, nobody is going to
21 look at it until the following week.
22 Now, we have witnessed winter
23 spreading, winter surface spreading, by
24 individuals who do so on weekends and at night, as
25 well. I've seen, along with a neighbour, a

1 commercial spreader injecting one pass. And that
2 is people who are hired to pump manure from a
3 lagoon. They use a hose. It goes to a tractor.
4 They have an injection unit on the tractor to pull
5 it through the field, go back and forth. Well,
6 they use it to inject into the ground. And that's
7 fine, if they were doing the right amount. But we
8 watched as the tractor went back over the same
9 road above the ground. This is sustainability?
10 This is on a Friday evening again. "Naturally
11 fertilized", the sign says right next to the
12 field.
13 As for myself, well, I have suffered
14 personal financial loss in the towns of Notre Dame
15 and Somerset, where local intensive livestock
16 operators threatened local businesses; telling
17 them they would no longer be doing business with
18 them if they hired me to do their Christmas window
19 decorations at Christmas time for one of the
20 businesses I do at Christmas. Been doing it for a
21 number of years in that town, but no longer.
22 Believe you me, there are a lot of fine people in
23 the town, don't get me wrong, but these hog
24 producers, this is what they have done. They
25 actually did that. They also went after a couple

1 of businesses in Somerset.
2 Also, a hog proponent filed a
3 complaint with the Department of Environment, this
4 is after I wrote a letter to the editor in the
5 local paper critical of the hog industry which,
6 against my business which, fortunately for me,
7 proved to be baseless, but was aggravating. But,
8 of course, these acts were cowardly, as these
9 people have never complained to me personally.
10 They prefer to act furtively. And I expect after
11 this presentation it might only increase. This is
12 not a very good picture of an industry priding
13 itself on helping rural communities. Factory hog
14 production seems to breed arrogance, while it
15 corrupts those who promote it blindly.
16 Now, we have Iowa operators protecting
17 themselves from bankruptcy by incorporating and
18 then suggesting that the government should
19 compensate them when and if disease should strike
20 their industries. That's sustainability?
21 Enough is enough! 8.5 to 10 million
22 hogs is more than enough. Our lakes tell us the
23 environmentally sustainable limit is reached. Our
24 groundwater is under threat and under boil water
25 advisory in my neighbourhood for sure, and my well

1 for sure, and at least half of the province, or
2 just over 40 percent, where livestock inhabits.
3 It is not just the hog industry, to be honest, to
4 be fair. The limit, though, in hog production is
5 reached. Sustainability is not happening now.
6 Growth is finite and must be curtailed now.
7 Let other countries take on
8 sustainable production, if they must, at their own
9 peril. Let's tell our government to make this
10 pause into a permanent moratorium. We won't be
11 able to prove the so-called environmental
12 sustainability until we let time and our efforts
13 prove we can manage the hog production our
14 province currently has. Our waters are our
15 barometers. Our children should not be our guinea
16 pigs.
17 Thanks for hearing me. Good
18 afternoon.
19 THE CHAIRMAN: Thank you,
20 Mr. Harrison.
21 RUTH PRYZNER, representing Citizens for the
22 Responsible Application of Phosphorous
23 MS. PRYZNER: My name is Ruth Pryzner.
24 I'm a small mixed farmer from the Rivers Alexander
25 area in southwestern Manitoba. And I've been

1 involved in activities relating to the hog
2 industry since 1998 as a member of my community,
3 the larger provincial community. And I've been a
4 decision-maker serving my community as a municipal
5 councillor from 2002 to 2006.
6 As such, I've gained considerable
7 experience and knowledge about the way in which
8 the hog industry operates in this province, how
9 and why decisions are made about the industry in
10 communities and by the provincial government, and
11 have examined a number of proposals in the course
12 of assisting people in being able to have a
13 meaningful and informed voice when a proposed
14 hog -- a proposal for a hog barn comes to town.
15 The experience and expertise that I
16 bring to share with you is not unique to me.
17 Within rural communities, those people who are
18 forced to face and respond to the demands of the
19 industry have developed significant expertise
20 about how the industry operates; the
21 decision-making approval process, and what they
22 can expect from the province, and the results of
23 having been forced to live with the effects of the
24 industry on a daily basis. We know that the
25 structure of decision-making processes definitely

1 and significantly influence the outcome of
2 decisions. And I have a lot of experience with
3 that.
4 Common sense tells us that in order to
5 arrive at sound decisions, seeking and finding
6 evidence-based truth before drawing conclusions
7 and making decisions based on these conclusions is
8 required. This is also an imperative in
9 science-based decision-making. Yet we must also
10 recognize that our understanding of and an ability
11 to understand our world through science is
12 limited. So, too, is our ability to understand
13 our relationships with the natural world and each
14 other.
15 Because of the subjective nature of
16 our objective relationship to our world and each
17 other, and the limits this places upon us, we have
18 to recognize that there is always a context in
19 which we evaluate and decide. The context in
20 which I tried to locate any search for truth and
21 facts and then, in making decisions, is centered
22 in the perspective of: Will it do harm? And if
23 so, is this harm significant and irreversible? I
24 submit to the Commission that this is a
25 fundamental prerequisite for making decisions in

1 the public interest.
2 We know, from our collective and
3 historical knowledge, that the health of the
4 environment is essential to the health of the
5 public. Therefore, acting in the public interest
6 requires that our collective public interest be
7 protected through our protection of our
8 environment. Preventive and precautionary
9 principles must be embraced, facilitated, allowed
10 and followed if protection of our environment is
11 to happen. Indeed, that is what the Sustainable
12 Development Act, as weak as it is, is trying to
13 tell us.
14 The decision-making process around the
15 hog industry, by contrast, is imbued by the
16 language of litigation. As Lindy Clubb, a
17 committed environmentalist, has described
18 litigation: It is like when you've been told that
19 you are going to be pushed off a ladder. The
20 question you must answer is: What do you want
21 broken; your arm or your leg? The question that
22 should be asked is: What is it going to take to
23 prevent you from being pushed off the ladder in
24 the first place?
25 So what I'm saying, and what you will

1 likely hear from members of the public who live in
2 rural communities, is that the public interest has
3 been subsumed under the corporate, private
4 interest. The public interest has not only been
5 ignored and dismissed by most decision-makers, it
6 has actively been put on the back burner in
7 relation to the industry's interests. This has
8 been facilitated through changes in legislation
9 such as the Planning Act, changes in regulation
10 such as the new phosphorous regulations, rules
11 that permit conflicts of interest with
12 decision-makers and bureaucrats, lack of
13 accountability of decision-makers, little redress
14 for members of the public through an effective
15 ombudsman process, rules that hide information,
16 instead of making it available for public use and
17 informed meaningful participation and
18 decision-making and environmental protection
19 processes, and even a conscious removal of the
20 ability for people to use the courts to ensure
21 enforcement of existing legislation and
22 regulations relating to hog operations, among
23 other things.
24 Members of the public have been
25 assured that the province is there to act in the

1 public interest and to protect the public's
2 interest in the environment in the decision-making
3 process that has been developed for us. This is
4 simply not happening. The process is not working
5 for the public or for the environment. Our
6 collective experience bears this out. And you
7 will hear details from people how this assurance
8 is fraudulent.
9 Indeed, your role here is to provide
10 advice and recommendations to the Minister of
11 Conservation. It was the Minister who provided
12 the Terms of Reference for the hog industry
13 review. While the Terms of Reference sound good
14 on the face of it, what is the real objective of
15 the hog industry review? What do we know? We
16 know that the province has been committed to the
17 expansion of the hog industry, and the priority
18 has been a focus on economic factors and economic
19 growth.
20 In fact, this commitment goes back
21 many years. In 1995, the R.M. of St. Francois
22 Xavier made the decision about a hog operation.
23 And the minutes read that Michael Radcliffe, who
24 was acting on behalf of the proponent:
25 "Reminded council that hog production

1 has been identified as an area of
2 agricultural growth by the provincial
3 government. He and colony
4 representatives advised of the local
5 benefits of an increased tax base for
6 the R.M., in addition to the other
7 benefits to the local and provincial
8 economies that result from active
9 agricultural businesses."
10 In my experience, this advice, and
11 government policy, has not changed, be it a
12 conservative government or an NDP government. The
13 policy of expansion of the hog industry has
14 continued and it has been facilitated by all
15 parties. In effect, there has been no real
16 opposition in government to the hog industry,
17 beyond rhetoric and the scoring of a few political
18 brownie points here and there. Economic benefits,
19 or rather the empty promise of them, drives the
20 policy decisions of all levels of government about
21 the hog industry, not environmental
22 considerations. Sustainability and protection,
23 prevention principles do not drive these policy
24 decisions. Evidence of this lies in many places.
25 One such place is events around the

1 introduction of Bill 40, the Planning Amendment
2 Act, and its withdrawal by the government that
3 introduced it, and then the introduction and
4 passage of Bill 33, what is now the Planning Act.
5 The intent of changing the Planning Act was
6 primarily to address the livestock issue, that is
7 the highly divisive hog industry, and to make it
8 easier for municipalities to subdivide land for
9 development.
10 These two bills were a legal solution
11 to a huge political problem. The political
12 problem was that members of the public, who were
13 concerned about our environment, those who had
14 doubts and sincere concerns, and were in
15 opposition to particular hog operations locating
16 next door in their communities, were becoming
17 educated and effective in slowing down the
18 industry, and even stopping some operations from
19 being approved.
20 But most importantly, members of the
21 public were drawing attention to the failings of
22 the government in addressing the needs of
23 communities and the environment in the hog
24 industry's expansion. People had puzzled out that
25 the government, acting as industry promoters, were

1 also the regulators. People had puzzled out, and
2 have been collecting evidence, that the government
3 and its representatives, as regulator, are not
4 acting in the public interest. This was
5 embarrassing and politically damaging and had to
6 stop.
7 So what did they do? They changed the
8 Act, and they enhanced the role of the Technical
9 Review Committee. And it was through the
10 Technical Review Committee that the government
11 expressed its interest when local decision-makers
12 were asked to decide on the siting of hog barns.
13 The Technical Review Committee became the
14 determiner of what conditions the council could
15 place on hog production. They must be relatively
16 reasonable.
17 And the burden of proof about the
18 merits of a proposal required under the former
19 Planning Act of a proponent was weakened, yet the
20 Terms of Reference for the TRC haven't changed at
21 all. The TRC still is not required to check the
22 accuracy of the applicant's information. In fact,
23 I have been told, by a member of the Southwest
24 Regional Technical Review Committee, that it is
25 not the TRC's job to verify the suitability of

1 spread acres, for example. So whose job is it?
2 And as a councillor I asked for information to be
3 provided to me to do this myself, I was unable to
4 secure it. I couldn't do my duty as a councillor.
5 Here is an example, and I've brought
6 you an example of what the Technical Review
7 Committee provides to decision-makers about the
8 environmental appropriateness of spread acres.
9 There is about three examples here, if you could
10 pass them down. And here is an example of what
11 was provided to me when I asked for it and the
12 department, the Technical Review Committee,
13 decided to turn my request into a FIFA request,
14 which meant I had to wait a long time for it.
15 And I had got the information after
16 the public hearing on the operation. And here is
17 what I was asking for. Because if you get this
18 kind of information, you can put a grid on it and
19 within a one percent accuracy, you can calculate
20 the amount of available spread acres. You don't
21 have to estimate. And that work was never done by
22 the Technical Review Committee.
23 The Technical Review Committee also
24 makes gross errors. There is tons of examples of
25 this where people in the community have found

1 gross errors. And I have been privy to
2 communities myself. I have experience with that.
3 The R.M. of Turtle Mountain, for example, the
4 T.R.C. didn't notice a major drain through the
5 spread -- some of the spread acres for a proposed
6 operation.
7 The R.M. of Portage rejected a
8 proposal, and I've got copies here, because they
9 just didn't seem to notice the marsh.
10 There was a proposal in the R.M. of
11 Lorne, and, gee, they forgot all about Swan Lake
12 First Nation community in looking at set-back
13 distances and the aquifer.
14 In the R.M. of Daly, you know, there
15 was interaction between ground surface water, but
16 there they really didn't know anything about that.
17 The local people did, but they didn't know
18 anything about it.
19 The silencing of the public, the
20 rendering of their participation in the
21 decision-make process from being a meaningful one,
22 through the changes to the Planning Act, to one of
23 going through the motions. That's what I hear
24 from people: What's the point of being there now?
25 And if, by chance, you know, they can get enough

1 political pressure to bear on the council to get
2 them to actually look at the proposal objectively.
3 And that whole process is particularly offensive
4 to me coming from an NDP government that likes to
5 think of itself and portray itself as an
6 environmentally-friendly government.
7 The actions of this government, under
8 the leadership of Gary Doer, Minister of
9 Agriculture Rosanne Wowchuk, and Conservation
10 Minister Stan Struthers, shows its commitment to
11 the environment as being mostly lip service, in my
12 opinion. But it is more than that. This
13 government has actively removed the ability for
14 the public to have a meaningful influence on
15 public policy and decisions about the environment.
16 Meaningful public consultations have been replaced
17 by stakeholder democracy. Unless you are a
18 representative of a group, regardless of your
19 interest and expertise, you are left out. That's
20 how they are running the watershed plan exercises
21 now.
22 The policy of reducing public
23 participation in decisions around intensive
24 livestock operations has been fully supported by
25 the Conservative Party. And I have referred you

1 to Bill 33 in Hansard, if you want evidence of
2 that.
3 And I would like to say that it is
4 disturbing to note that the Pork Council at these
5 hearings was pushing the government to restrict
6 those who could attend conditional use hearings to
7 those who lived within a very short proximity of
8 their proposed operations. So I ask: Where is
9 the industry's interest in ensuring that the
10 larger environmental concerns are addressed in
11 this process?
12 Other initiatives of the government,
13 such as the Water Protection Act and regulations,
14 such as the new phosphorous regulation, have
15 little meaning to people who are living with the
16 effects of environmental degradation, if they fail
17 to translate into action and are supported by
18 appropriate resources and research from the
19 government.
20 The provincial view, as expressed, in
21 particular, through the Planning Act, the role of
22 the Technical Review Committee and government
23 bureaucracy in the approval and permanent process
24 for industrial hog operations and livestock manure
25 mortality management regulation is grounded in the

1 principle of litigation, as opposed to operating
2 on the principle of prevention or precaution.
3 This is a deliberate legislated and unwritten
4 policy of government that expresses itself in
5 various venues. This policy is reflected in the
6 way in which the technical review process proceeds
7 and the advice and recommendations provided to
8 local decision-makers. And we're getting bad
9 decisions as a result of that.
10 I want to talk a bit about the
11 phosphorus regulation because an examination of
12 these regulations is going to be central to the
13 evaluation of whether or not the hog industry in
14 Manitoba is sustainable. One of the central
15 points of the Lake Winnipeg Stewardship Board, the
16 Manitoba Phosphorous Expert Committee, scientists,
17 and the government has acknowledged this
18 themselves, is that applying more nutrients to the
19 land than what crops can help use causes build-up
20 and saturation of soils over time. Scientists
21 tell us that excess nutrients can, at any time,
22 become available to move into surface waters. A
23 small amount can cause significant problems.
24 The key to minimizing this is to apply
25 nutrients to land at the rate that crops can use

1 them. The fact is the new regulations allow for
2 manure to be applied at varying accelerated rates
3 until soil test readings, using the Olson method,
4 exceed 825 pounds of phosphate or P2O5 per acre.
5 To put this into perspective, the
6 lowest user, a 24 bushel crop of flax, removes
7 18 pounds per acre of phosphate with the seed and
8 straw. A 40 bushel of wheat crop uses 32 pounds
9 per acre, Canola 58. And 100 bushel crop of corn
10 or silage uses about 60 pounds per acre. So why
11 do we need 825? Soil test. Because, basically,
12 what the soil tests are measuring is about 10
13 percent of what's actually there. 90 percent,
14 about 90 percent of the phosphorus that's been
15 applied, is found in the soils. And this is from
16 information that is used in classrooms by soil
17 scientists to teach students about phosphorus.
18 So, I mean, obviously, a significant amount is
19 getting into our water. We have got 900 tonnes in
20 Lake Winnipeg, that's the estimate anyway.
21 So Pork Council people, at conditional
22 use hearings, refer to this as money in the bank,
23 attempting to convince municipalities to approve
24 the next hog operation but, in fact, it's an
25 ecological time bomb. The phosphorus regulation

1 simply is a licence to pollute. The Pork Council
2 claims that manure is applied at agronomic rates.
3 Then I ask you: Why is it going to cost the
4 industry $14 to $28 million to meet the
5 regulations?
6 It is also interesting to note that
7 the Pork Council chair, Karl Kynoch, wrote in a
8 Winnipeg Free Press article that the industry
9 worked closely with the government in developing
10 these regulations and the thresholds. This is one
11 of the reasons why the information I've requested
12 through the FIFA process becomes so important to
13 access and to analyze prior to any conclusions
14 being arrived at by your panel. It provides the
15 data for Manitoba's science-based assessment of
16 the ecological impact of the hog industry in
17 Manitoba on its soil and water resources. And it
18 also is going to tell us what kind of job the
19 province is doing.
20 But I have been informed that I have
21 to wait 13.5 years for it. And that's been told
22 to me by the Ombudsman, who is supposed to be the
23 body, the body of the legislature, that's supposed
24 to investigate matters where members of the public
25 think they have been aggrieved by a public body.

1 They are acting on behalf of the government
2 department to prevent me from getting this
3 information for the purpose of the CEC review.
4 I have recently been informed by the
5 Ombudsman's office, as well, that I will now have
6 to wait until September 2007 for the complaints
7 that I had submitted about important on-the-ground
8 information having been excluded from access
9 requested that I had submitted last year, such as
10 information about manure spreading and the
11 content. And I have to wait until September for
12 those to be addressed. And they told me it's
13 because there is this large volume of requests
14 that the department has to deal with. That's
15 called blaming the victim, and it's called hiding
16 information. And until this matter is resolved,
17 this interpretation will inform all of the
18 requests that are fulfilled.
19 And it is important to note that the
20 Finding Common Ground report, in key
21 recommendation number 2, states that:
22 "The Government of Manitoba should
23 accumulate all relevant data
24 concerning livestock operations in a
25 central openly available information

1 system, in a geographic information
2 format, to provide Manitobans with a
3 realistic assessment of the
4 sustainability of current operations
5 and their effect on both the local and
6 provincial governments because they
7 recognize that reliable information
8 must be available, not only to
9 government and industry, but also to
10 the concerned public."
11 I'm concerned that you have advised
12 Mr. Koroluk that you are not prepared to assist
13 members of the public in accessing information
14 through the FIFA process. I think you would be
15 hard-pressed to do a credible examination of the
16 hog industry without this information.
17 The Manitoba Pork Council has asked
18 that your decisions be science-based. But my
19 question is: Who is controlling the science in
20 this process? The Commission and the industry, as
21 I see it.
22 No funds have been provided to public
23 community groups for research. Those have been
24 specifically excluded from the process. The funds
25 are available on a reimbursement basis which means

1 that people have to have the money in the first
2 place. And farmers aren't flush with cash. Rural
3 residents aren't flush with cash these days.
4 I encourage the Commission to ask the
5 question: Why is the Pork Council taking this
6 political position: To narrow the scope of the
7 investigation and have it science based. When the
8 industry started its big expansion, the approach
9 from the Pork Council was to insist on
10 science-based decisions. When people in rural
11 communities rose to the challenge and presented
12 project proponents with science and local
13 expertise, finding gross errors in industrial hog
14 operation proposals and technical review reports,
15 the Pork Council changed its tactic to insisting
16 on made-in-Manitoba science, arguing that science
17 from other parts of the world and the experience
18 of people living in rural areas and other parts of
19 the world were invalid.
20 Minister of Agriculture, Rosann
21 Wowchuk, began parroting this line as well. So
22 calls from those who are concerned about the
23 environment or water and the effects of industrial
24 hog production in rural Manitoba on the provincial
25 government to commit resources to investigate what

1 is actually happening in Manitoba and produce
2 made-in-Manitoba science in order to inform the
3 public have been unheeded.
4 The vast majority of information has
5 been in the form of publicly subsidized
6 industry-driven studies. Now that the public has
7 been able to identify the significant deficiencies
8 and the lack of made-in-Manitoba science, the Pork
9 Council is calling on the Commission to make
10 science-based decisions. This encourages you to
11 reject the out of provincial science now that will
12 presented to you and see it as invalid. It is a
13 nice little political circle.
14 I would challenge you to break the
15 circle and acknowledge what Dr. Eva Pip has been
16 saying for years, mainly that Manitoba's pigs,
17 Manitoba's province and Manitoba's environment are
18 not as unique as the Pork Council would have you
19 believe. Biologically, we are the same as the
20 folks who live in North Carolina, Europe, Mexico
21 or Brazil. Pigs are biologically the same
22 worldwide. Our soils, while there may be
23 variations within Manitoba and North America, are
24 not different enough to warrant a complete
25 dismissal of the scientific evidence that has been

1 introduced in other areas. Regardless of the
2 position one may take on the issue, the science is
3 clear: Overloading soils with nutrients beyond
4 the capacity of plants to use them in a growing
5 season is bad news for Manitoba soils and bad news
6 for our water.
7 Just one second. I'm a farmer. I see
8 my relationship with the land as borrowing the
9 land from future generations, which is a concept
10 rooted in aboriginal traditions. I would
11 encourage the commissioners to ask why I would be
12 asking for tighter controls over food production?
13 I certainly -- it is certainly not in my economic
14 best interests to ask for this, if I buy the Pork
15 Council's argument. It is hard enough to make a
16 living from farming without adding more expense to
17 what I do.
18 So I suggest that you have to question
19 the motivation of all of the people who will be
20 presenting to you. Are their motivations rooted
21 in the public interest or are they rooted in the
22 individual or corporate interest? Does their
23 message serve to enhance the interest of
24 communities and the health of the people who live
25 in them? Does their message serve to protect and

1 restore the quality of the lifeblood of our
2 planet, which is our water? Does their message
3 serve to do no harm and to find ways of restoring
4 our environment and the ecological and human
5 communities dependent upon its health or are they
6 attempting to advance a private corporate
7 interest?
8 Our experience has been that the
9 government's policies and actions are aimed at
10 facilitating the expansion of the hog industry,
11 without any regard to the environment or the
12 health and well-being of the people and the health
13 and impact in the areas. We have been given
14 endless assurances by government and industry that
15 they are good environmental stewards and that
16 these assurances have been proven false.
17 Now we are told that the CEC is going
18 to conduct a thorough review of the sustainability
19 of the hog industry? Why should we believe this
20 or the Minister of the Environment? In fact, it
21 appears that the minister's view is completely
22 antithetical to a thorough review. In a letter
23 dated February 13, 2007, Minister Stan Struthers
24 wrote to Mr. John Fefcak, a concerned citizen:
25 "The time is right for Manitoba to

1 take a step back and have the Clean
2 Environment Commission conduct an
3 independent public review of the
4 sustainability of the hog industry and
5 the province's water protection plan.
6 We must work to restore public
7 confidence in the industry and in the
8 provincial government's regulation of
9 the industry."
10 Perhaps this helps explain why, after criticizing
11 the government's long awaited phosphorus
12 regulation in the Winnipeg Free Press, Norm
13 Brandson is no longer a member of the CEC panel
14 conducting this review.
15 The politics of pork in this province,
16 as it has elsewhere, has compromised just about
17 every decision-maker in this province. It has
18 split communities and jeopardized the future and
19 well-being of Manitobans, and the environment upon
20 which we depend, in the name of so-called economic
21 development. Your challenge is, in this
22 structurally defective process, to rise above
23 this. And I'm hoping to be delightfully
24 surprised. Thank you.
25 THE CHAIRMAN: Thank you, Miss

1 Pryzner.
2 Mr. Koroluk, I just note we are going
3 to break at 5:30 for supper. If your people are
4 not finished, we will come back at 7:00 to finish.
5 MR. KOROLUK: 5:35 tops?
6 THE CHAIRMAN: 5:35 tops.
7 MR. TAIT: Well, Mr. Chairman, and
8 members of the panel, I certainly do not envy the
9 task you have before you. Because, in a more
10 perfect world, we would have been holding this
11 process and having these discussions some ten
12 years ago and made our plans upfront as to how an
13 industry would expand, what some of the pitfalls
14 would be, and what steps we would take to do some
15 environmental and social and economic protection
16 for the people that could be negatively impacted.
17 But, unfortunately, it's become more
18 of the norm in Manitoba now where we go ahead and
19 we do a development. We study its impact
20 afterwards. And we try to mitigate the negative
21 circumstances that arise from those developments.
22 And it's already been mentioned here
23 today that government is playing multiple roles.
24 Government, both the current and the previous,
25 were promoters of the expansion of the intensive

1 livestock industry. That's a legitimate role for
2 government.
3 They also have assumed the role of
4 being the financier of the development, through
5 loan guarantees, through the Manitoba Agricultural
6 Credit Corporation. That's a traditional role of
7 government. Governments finance projects that
8 they see as economic development.
9 The government then takes on the role,
10 that is only really the role of government, to
11 play the role of the regulator. That's a
12 traditional role and a legitimate role of
13 government. Then, of course, they take on the
14 role of regulation, enforcer. And there is an
15 obvious contradiction in those four roles.
16 Government will not put equal emphasis on all four
17 of those.
18 And, unfortunately, and I say
19 unfortunately, and perhaps my information is not
20 correct, but I understand there was an application
21 for intervenor funding to do a regulatory review
22 on how regulations are developed, and how they are
23 applied, how they are enforced in relation to the
24 livestock industry in Manitoba. And that
25 application, I understand, was turned down. And

1 because, if my information is correct, and it was
2 turned down, then that puts a tremendous load of
3 work, I guess, on the Commission itself to do that
4 regulatory review.
5 Because, in my experience and my
6 observation, and my colleague group here has just
7 touched on it, there are failures there. And if
8 we don't address the failures in the regulatory
9 system, and the contradiction of roles a
10 government tries to exercise then, of course, we
11 will go into the future with the same flawed
12 regulatory regime, with the same results coming
13 out of it. And I don't like to even anticipate
14 that happening, but it certainly is a possibility.
15 In the order of reverse order, we have
16 seen, or witnessed within the last year or two
17 years, great discussion about creation of new
18 nutrient management regulations. One would have
19 thought, if one was serious as a government, they
20 would have engaged in this process and had a
21 recommendation come out of this process before
22 embarking. So I have to assume that a provincial
23 government that has invested so much political
24 capital in establishing these regulations would
25 consider amending them? In all likelihood, not.

1 I also was fairly heavily engaged in
2 the discussions that led to Bill 40, which was
3 withdrawn to change the Planning Act. And
4 subsequently it came back with hardly any change
5 at all, known as Bill 33.
6 And my colleague, Ruth Pryzner, has
7 had more experience than I in this. But I think
8 there is something the Commissioner should address
9 here in your deliberations and study. And you
10 have to ask the question: From what source did
11 the initiative come to change the Planning Act,
12 and who were the main beneficiaries of those
13 changes? And how did those changes or how will
14 those changes protect the environment and the
15 sustainability of our natural environment?
16 And the same comment can be made, to
17 an extent, about the Water Protection Act and the
18 Nutrient Management Zones. The opposition to
19 nutrient management regulation was extensive. It
20 was well funded, and it was very effective.
21 But the Commission, I think, you have
22 to ask yourself and understand some things. On my
23 farm, where I circulate the feed source from my
24 land, through my livestock, and from my livestock
25 back out on to the fields, it is impossible for me

1 to have a nutrient build-up. In fact, I will have
2 a nutrient loss, to some extent, because some of
3 the nutrient goes with the livestock and there is
4 an erosion from time to time. And then I build
5 some of that up again with legume crops.
6 But my main concern, in looking at
7 this industry, is the economic framework in which
8 it's forced to function. And in 2003, a very
9 critical report was published. And it was
10 authored by Dr. Ed Tyrchniewicz and Heather E.
11 Gregory. They had done a contract for the Federal
12 Department of Agriculture. That report shows
13 conclusively that Manitoba had lost its
14 competitive advantage in hog production at the
15 time that report was published in 2003 and, in
16 likelihood, it had lost its competitive advantage
17 sometime earlier than that.
18 And it had lost its competitive
19 advantage for two reasons. One totally beyond any
20 control, and the speculation was the increased
21 value of the Canadian dollar. The other was the
22 cost of importing feed grain. And the
23 Tyrchniewicz-Gregory study showed that in 2003
24 Manitoba had a huge feed grain deficit. They were
25 recording Manitoba Department of Agriculture

1 statistics. The late Darryl Kraft and a
2 colleague, Rude, in the same timeframe, published
3 another report that showed that deficit could be
4 as large as one billion tons.
5 So then the question comes, I think,
6 for the Commission, because I've struggled with
7 this: Why would the industry and the Provincial
8 Government continue to finance and promote and
9 expand an industry in the North American market
10 when it was clear you had lost your economic
11 advantage in that marketplace? That is a
12 difficult one to ask -- to answer. Because then
13 when you come or say, well, there are some fixed
14 costs that you can see to hog production, feed
15 being the largest one. Environmental regulation
16 fits into that equation someplace, and so does the
17 cost of labour. What other factors could we
18 factor in that we could regain our competitive
19 advantage in the North American market? Because,
20 obviously, they must have known something, or had
21 some intent, because I think there is enough
22 business sense in the industry, and I hope there
23 is enough business sense over on Broadway, to know
24 that it was futile to expand an industry with
25 public loan guarantees when you had lost your

1 competitive advantage.
2 Another thing that has puzzled me,
3 again on the economic side of this whole equation,
4 it was one thing to promote and develop this
5 industry to the level we have, in spite of this
6 huge feed grain deficit.
7 But almost simultaneously, in the last
8 three years, we're also pushing an ethanol
9 industry. And in the Renewable Fuels Act, the
10 processor of ethanol is required to consume
11 Manitoba-produced grain that doesn't exist. How
12 can that be? These are things for the Commission
13 to discover. How could it possibly be that by
14 developing ethanol, you are going to put pressure
15 on the feed grain supply for the livestock
16 industry you have already promoted, which has an
17 inflationary pressure on feed grain prices, which
18 puts an industry that already was identified as
19 being at an economic, or at a competitive
20 disadvantage, at more of a disadvantage? How
21 could such inconsistency come from the same
22 sources? That question, I think, needs to be
23 resolved. Because, in the end, Ed Tyrchniewicz
24 and Heather Gregory pointed out that if this
25 industry fails, the province is so heavily

1 burdened with loan guarantees, it could have a
2 tremendous impact on the financial stability of
3 the province itself.
4 Other plans that I sometimes have
5 trouble understanding if they exist or they don't
6 understand, is we have some experience in the
7 cattle industry, where I am, with border closures.
8 And we've had some outbreaks of disease in other
9 livestock periodically over our long history.
10 What does the contingency plan look like if we
11 suddenly lost ability to export? Because of the
12 nature of the hog industry and its tremendous
13 capacity and rapid productive capacity, we would
14 be in a crisis in days. What does the contingency
15 plan look like?
16 I also, as a farmer, just dread the
17 fact that when you turn on a radio and you hear a
18 barn burn of any nature, whether it be dairy or
19 whether it be poultry or hogs. But I think the
20 Commission itself needs to say: Why is it that we
21 do not have a building code concerning farm
22 buildings that would at least give some
23 preliminary fire protection?
24 I have a close acquaintance who
25 attended one fire of a hog barn. The stress of

1 thousands of animals being burned to death so
2 affected him that he will never again go to a
3 fire. He withdrew from the local fire department
4 over that. He has nightmares over it.
5 I also cannot help but note, again
6 today, that when we're talking about industry,
7 whether it be agriculture, and today we are
8 talking about the production of intensive
9 livestock, and particularly hogs, we seem to look
10 at figures of gross income. Gross incomes
11 figures, as any of us in agriculture know, are
12 very misleading.
13 I would think that the Commission
14 should look at net income. Look at the net income
15 that is separated from program support and
16 off-farm income to give you a true picture of the
17 economic health of the industry. Because, in my
18 observation, if an industry is not economically
19 healthy, I don't see how it can possibly be
20 environmentally healthy, because people will be
21 forced to cut corners. And so by breaking those
22 figures apart, you can get a pictures, I think, of
23 economic health. And I don't envy you that task,
24 because there are individuals I'm associated with
25 who have, for some time now, tried to break apart

1 what level of program support is going to this
2 industry and other industries, and we can't do it.
3 Perhaps the Commission, with its resources, will
4 be more successful.
5 I also think that the Commission
6 should be leery when they hear talk about the area
7 can utilize this or that level of nutrient. You
8 have to be site specific. Because you can talk
9 about the 13 million-acres of cultivated land that
10 we have available, and that would be about as
11 rational as taking the population of Manitoba and
12 spreading it over the same acreage and ignoring
13 that the Cities of Winnipeg and Brandon exist. It
14 has to be site specific when you are talking about
15 an industry. It's the impact of the industry on
16 the land base that the industry itself is actually
17 occupying and using.
18 You also have to ask yourself, and it
19 came up here today, about: What if? And there
20 will be instances in the future where operations
21 will go bankrupt, will be abandoned for economic
22 reasons and so on. You have to ask: Why did the
23 Province initially reject bonding for public
24 protection? That was the first regulation out of
25 the Tyrchniewicz, Carter Whitaker study, Finding

1 Common Ground, that was instantaneously rejected
2 by the Minister of Agriculture. Why? And in
3 whose interest did that abandonment serve?
4 And if we have an abandonment, I think
5 that the Commission should look at how would
6 abandonment take place? And I believe that
7 abandonment would take place by abandoning the
8 structure and then failing to pay taxes upon it
9 and then it would resort to local government. So
10 we have seen lots of that sort of thing, with the
11 knowledge of underground storage tanks, and stuff
12 like that, that were leaking. And there was a
13 huge liability to try and clean those sites up.
14 And those sites became unsaleable. Nobody else
15 wanted them because they would assume the
16 liability. That is an area that I think is worth
17 the Commission taking a look at.
18 There have been some discussions about
19 public participation. I will maybe get into that
20 in closing. But I would ask the Commission to
21 consider, we have had discussion about the
22 Planning Act, and you will hear lots more. Why
23 would there be a difference between urban and
24 rural planning? Why would it be seen necessary
25 that the Province would have to impose a level of

1 control on planning and rural areas and not in
2 urban areas? Where does the initiative of that
3 come from? Who can benefit by such a system and
4 by how much and when and how?
5 There will be a lot of talk in the
6 next weeks when you go around the Province about
7 the issue of water licences being issued. And
8 there was a discussion a bit today, a question
9 came, a good question from one of the
10 Commissioners, about this very issue. I can
11 rattle off some instances where water licences
12 were provided on unproven aquifers and the wells
13 went dry within weeks of the beginning of the
14 operation. So I don't have confidence as to the
15 industry and the knowledge of the Province's main
16 aquifer like the Carvery Aquifer, yes. The
17 Sandilands Aquifer, yes. I have a pretty good
18 understanding of them. But the small aquifers
19 where barns are being located, that knowledge does
20 not exist.
21 And I can tell you of instances where
22 adjoining wells, on adjoining properties, soon
23 went dry after these wells came in operation. The
24 local land owners, long-term owners, were
25 inconvenienced and had no recourse because you

1 cannot prove, in a court of law, that your well
2 went dry because somebody else pumped the water
3 out of the aquifer.
4 I would ask that the Commissioners
5 also look at the issues of the economics of
6 over-application of commercial fertilizers. I
7 don't know of a banker in Manitoba that would
8 entertain a farmer coming in and saying: I would
9 like to apply 825 pounds of PTO5 on my field this
10 year. But the economics of a livestock industry,
11 or an agriculture industry, in general, that is
12 hard pressed economically, the economics are that
13 over-application is a form of financial survival
14 and environmental destruction.
15 And when you, in time, you are going
16 to hear presentations from the public about the
17 inconvenience of odour. And you saw a short
18 presentation today from the Council, saying that
19 77 percent of people surveyed had no negative
20 experience. That's logical, because the survey
21 took a list of residents that circled the
22 operations. Our winds are prevailing from the
23 west, northwest, southwest. And under normal
24 conditions, I wouldn't expect the people to the
25 north, to the direct south, to the west, northwest

1 and southwest of the operations would ever smell
2 any odour. And if they did, it would be only on
3 very rare occasions, so be conscious of that.
4 The other issue that I think the
5 Commission needs to ask itself, and to people who
6 come before it, can an intensive livestock
7 industry function without the non-therapeutic use
8 of veterinary drugs? Because if it can't, then
9 what are the -- what are the alternatives? And
10 where does that put the Commission in its final --
11 in its final -- writing its final report?
12 When we -- when we finish up this
13 process, you will have heard from many people.
14 And you have heard from some here today. You have
15 heard from residents that have very legitimate
16 complaints about the type of service they have
17 gotten from civil servants, whose only task in
18 life should be to service the public good. These
19 are legitimate complaints. What this type of
20 service does is it damages the public's confidence
21 in government. And from experience, any of us
22 that live in rural communities, we have a
23 hostility to government as it is, without throwing
24 these types of buckets of fuel on to it.
25 You have already heard today, and you

1 will hear again, that critical information that we
2 need to make a very good judgment as to the
3 success and failure or where we should make
4 adjustments in looking and developing livestock
5 that we have is not available, will not be
6 available until at least 2020. And if the
7 Ombudsman keeps us what he is doing, it might not
8 be available by then.
9 You will hear, as you go around the
10 communities, how when people were trying to
11 actively participate in developing their planning
12 for their communities, how they were overwhelmed,
13 particularly by department staff, and the
14 Department of Agriculture, and also from paid
15 staff from the Manitoba Pork Council.
16 You will hear evidence of long delays
17 in responding to complaints from citizens of
18 environmental infractions to such a degree that
19 the evidence of the infraction is gone and the
20 response to the complainant is: No such evidence
21 was found.
22 And your report, in the end, will
23 emerge from this. And those of us that take an
24 interest in environmental issues, we will get
25 copies. And we will keep them and we will refer

1 to them in the future because environmental
2 protection and public participation really never
3 ends.
4 But there is another report that's
5 being written. And that report is being written
6 by the natural environment in which we live in.
7 Lake Winnipeg is writing its own report. The
8 Stephenfield Lake is writing its report. The
9 Little Saskatchewan River is writing its report.
10 And at the end of the day, future critics,
11 observers, will compare the report that came from
12 the Commission, and from this process, and they
13 will compare the one that comes from the natural
14 environment. And they will make their own
15 judgment calls of what success we were in
16 preventing the one that comes from the natural
17 environment as being as bad as I suspect it's
18 going to be. Thank you.
19 THE CHAIRMAN: Thank you, Mr. Tait.
20 Ms. Burns.
21 VICKI BURNS, representing Winnipeg Humane Society
22 MS. BURNS: Okay. Hello. I'm Vicki
23 Burns, Executive Director of the Winnipeg Humane
24 Society.
25 And I am going to end on, I would say,

1 kind of a positive note in the sense that I would
2 really like to make comments related to how I hope
3 that the hog industry will move forward. I'm
4 really focusing on the production systems.
5 I am not going to talk about animal
6 welfare because I understand that's not the
7 purview of this Environment Commission. But it is
8 really important to understand that the production
9 systems are really what this industry --
10 everything else flows from how the pigs are
11 raised. So I think it's terribly important to
12 really pay attention to the type of housing, what
13 type of manure collection system is in place,
14 whether the animals are raised on straw, whether
15 sub-therapeutic antibiotics are used. Those types
16 of issues are all of tremendous importance to
17 ultimately what environmental effects flow from
18 this industry.
19 Now, just a little bit of history.
20 Since the 2nd World War, agriculture all over the
21 world has been based on an industrial model. And
22 in animal agriculture, the industrialization has
23 resulted in what we all know as intensive
24 livestock operations. In the simplest of terms,
25 that really means raising many, many animals,

1 sometimes thousands of animals, in very confined,
2 unnatural conditions and relying on the use of
3 very small doses of antibiotics to make it work.
4 The production systems have accounted
5 for the very basic needs of the animals. In other
6 words, their need to be fed, and have some
7 shelter, and so on. But what they haven't
8 accounted for is what we call the species-specific
9 needs of the animals. And the measures that are
10 taken to mitigate that, in other words, the
11 industrialization not being able to take into
12 account the species-specific needs of the animals,
13 the measures that are taken are often part of what
14 we are now witnessing as what we consider the
15 environmental problems.
16 And I think, you know, what your
17 Commission is going to be looking at is a lot of
18 the issues related to air quality, water quality,
19 human health. For many reasons, we are now
20 learning that trying to raise large numbers of
21 animals in the cheapest ways has other hidden
22 costs. So I believe, and I think lots of other
23 people believe, that this industrial style of
24 animal agriculture really isn't sustainable in the
25 long run. And it won't be sustainable, not until

1 we can actually put recognition of the animals'
2 species-specific needs back into the equation.
3 So what does that really mean to the
4 hog industry? It is kind of a scientific-sounding
5 term. But specifically it means: What do pigs
6 actually need to do? Well, what it means is they
7 need to root in something. And we have a lot of
8 what they like to root in, and that is straw. So
9 I am really, really urging the industry, actually,
10 you could use the words "begging the industry", to
11 please listen to this, because there is many good
12 reasons that you are going to hear, from all over
13 the world, why we should be using straw-based
14 systems.
15 Pigs have an innate desire to root
16 around. That's how they spend a lot of their day,
17 if they possibly can, looking for bits of stuff to
18 chew on and eat. And they also have this
19 instinctive need to create a nest for themselves.
20 And here in Manitoba, we do have some straw-based
21 systems. And we know that they are working
22 properly.
23 Feeding animals what they need to eat,
24 it sounds good but, actually, it's not enough. I
25 know that some of the hog industry have heard from

1 Dr. Peter Brooks, from the University of Plymouth,
2 who I think gave a presentation recently at the
3 Manitoba Swine Centre, or at least he did in the
4 last couple of years, where he talks about the
5 feed requirements of pigs is far more than their
6 nutritional needs. In other words, they need to
7 feel full. They need to actually fill up on
8 stuff. And allowing them to chew on straw,
9 throughout the day, is the most economical and
10 environmentally-friendly way to do that.
11 Another of the reasons why our hog
12 industry should move towards straw-based systems
13 is basically economics. Now, since we met last
14 time, there has been some tremendous news in the
15 hog industry. And that is the announcement from
16 Smithfield Foods and from Maple Leaf foods that
17 they are going to phase out the use of gestation
18 stalls over the next ten years. That is an
19 indication of consumer's interests, and that's
20 only going to grow. Consumers are interested in,
21 you know, buying pork that comes from what they
22 consider humane systems. They know that raising
23 pork on straw is consistent with the idea of
24 allowing animals to fulfill their natural
25 instincts. So economically, if we want to be part

1 of the world market, it's important for us to
2 recognize that now. Please don't dig your heels
3 in about that.
4 There are also other environmental
5 advantages. Recently I spoke to Dr. Katherine
6 Buckley, from the Agriculture Research Station in
7 Brandon, about the issue of straw-based systems.
8 She is doing a lot of research on that. Now, one
9 of the very positive things is air quality. There
10 is a scientific reason why having animals on straw
11 creates far less odour than having no straw. The
12 ammonia loss is reduced tremendously when manure
13 is mixed in with straw. So hopefully that kind of
14 science will reach your hands because it is very
15 important.
16 On that note, I really respectfully
17 urge you to visit barns. If you haven't already,
18 visit and compare your own personal reaction to
19 being in barns that have the liquid manure and
20 being in barns with straw based, because there
21 really is a very big difference.
22 One of the other environmental --
23 positive environmental impacts that come from
24 straw-based systems, according to Dr. Buckley, are
25 that when the straw-based systems compost the

1 manure before they put it on the fields, it
2 actually helps a lot in terms of water retention
3 of those soils. So if the composted manure is
4 being put on soils that is highly erodible, it is
5 going to help decrease that erosion. And with
6 what we're hearing now about climate change and
7 the predictions about drier summers and so on,
8 building in something that's going to actually
9 help our soil retain water just makes a lot of
10 good sense. So that research is right in our
11 hands here in Manitoba right now, and we can refer
12 to that.
13 One of the other issues related to the
14 public's heightened interest in climate change now
15 is the -- what I consider the fairly recently
16 recognized contribution of animal agriculture to
17 greenhouse gas emissions. You know, that's just
18 something that a lot of us have not really paid
19 very much attention to, but it's going to be --
20 there is a lot more attention that's going to be
21 paid to it in the next few years, I'm certain of
22 that.
23 And, ultimately, what that may mean
24 for animal agriculture in Manitoba, and all over
25 the world, is it may mean that there are going to

1 be fewer animals raised for food. So I don't
2 think it's crazy to predict that we are probably
3 going to have to decrease the number of pigs who
4 are raised in Manitoba. But if we make sure now
5 to set our industry on the right course, we can
6 ensure that, even if we raised and produced only
7 half the number of pigs over the next ten years,
8 if we do it the right way so that the world market
9 is there for that product, and we build in that
10 producers get compensated more per animal, we are
11 going a long way towards long-term sustainability.
12 Now, on the note of fewer animals, I
13 just want to make the point that Maple Leaf, one
14 of the largest hog producers in Canada, have
15 announced that they are very significantly
16 decreasing the size of their sow herds. And I
17 think that's really an important factor for the
18 industry to pay attention to.
19 One of the other developments that's
20 very recent, and that should be a red flag to our
21 hog industry, is that in the Unites States there
22 has been a lot of attention focused on the
23 non-therapeutic use of antibiotics in animal
24 agriculture. And recently, I believe it was just
25 in the last month, there was a bill introduced,

1 both to the Senate and to Congress, that
2 essentially it could combat the antibiotic
3 resistance crisis in human healthcare by phasing
4 out the non-therapeutic use of antibiotics in
5 animal agriculture. This bill is supported by
6 more than 350 groups in the Unites States,
7 including the American Medical Association, the
8 Infectious Diseases Society of America and the
9 American Academy of Pediatrics.
10 And a recent report that was
11 co-authored by Dr. David Wallinga, from the
12 Institute of Agriculture and Trade Policy in
13 Minneapolis, his report has demonstrated that the
14 routine use of antibiotics in livestock production
15 is contributing to the rise of
16 antibiotic-resistant germs in humans. And that is
17 something that is going to really create much more
18 public concern. And there is no question that is
19 going to come to Canada. So let's be ahead of the
20 game and build in systems that can work without
21 using those sub-therapeutic antibiotics. Raising
22 thousands of animals under one roof in tight
23 conditions, it is simply not going to work, unless
24 you can give them those types of antibiotics, and
25 that's going to stop soon.

1 So to conclude, I want to reiterate
2 that we do need to pay attention to all of those
3 recent developments. The Maple Leaf and the
4 Smithfield's announcements about the phasing out
5 of sow stalls; the news about the overall impact
6 of greenhouse gas emissions from livestock
7 production; the proposed legislation in the States
8 about phasing out the non-therapeutic use of
9 antibiotics; and the dire straits of Lake
10 Winnipeg. Really, it is time for Manitoba to get
11 serious about building a hog industry that is
12 sustainable well into the future.
13 Our province is heavily reliant on
14 agriculture. Really, we should all be looking
15 long term, not at the profits over the next five
16 years. But if we care about our children, and our
17 grandchildrens' future, and the future of farmers
18 in this province, we can see now what needs to be
19 done. And I really beg all of you to pay
20 attention to that.
21 And we cannot pay attention to what
22 this industry is -- we can't do it without paying
23 attention to what the industry is built on. They
24 are animals. I'm sorry to have to remind you of
25 that, because I know you don't want to pay

1 attention to that, but they are animals. And in
2 order to have it long-term sustainable, we need to
3 recognize the species-specific needs of those
4 animals. We need to put respect for nature and
5 for animals back into the equation. If we can do
6 that, we will go a long way towards ensuring that
7 our hog farmers will have a livelihood to count
8 on, and that we will have an environment in
9 Manitoba that's safe and healthy for all of us.
10 Thank you.
11 THE CHAIRMAN: Thank you, Ms. Burns.
12 Do you have any wrap-up, Mr. Koroluk?
13 MR. KOROLUK: No.
14 MS. JOHNSON: Mr. Chairman, can I just
15 jump in for a second? Can I get copies of your
16 presentations to put on the record, just as a
17 reminder, because it's an important part of this
18 whole process. Thank you.
19 THE CHAIRMAN: I would like to thank
20 Mr. Koroluk, in particular, for putting together
21 this group. And I would like to thank all five of
22 you for your very thought-provoking presentations
23 this afternoon.
24 We are now going to break for supper.
25 We will be back here at 7:00.

1 (PROCEEDINGS RECESSED AT 5:31 P.M.
2 AND RECONVENED AT 7:01 P.M.)
3 THE CHAIRMAN: Good evening. Could we
4 come to order, please? Good evening. I would
5 like to come back to order. So far we have had
6 four people request to make presentations this
7 evening. If anybody else would wish to make a
8 presentation tonight, please let Joyce, at the
9 back of the room, know.
10 The first person we have up tonight is
11 Mr. Van Slyke. Mr. Van Slyke, would you please
12 state your full name for the record, and then I
13 will have the commission secretary administer the
14 oath?
15 Victor Van Slyke, representing ATD Waste Systems
16 Inc.
17 MR. SLYKE: My name is Victor Van
18 Slyke.
19 VICTOR VAN SLYKE: Having been sworn in, presents
20 as follows:
21 THE CHAIRMAN: You may proceed.
22 MR. SLYKE: Good evening, everyone.
23 As you know, my name is Victor Van Slyke. And ATD
24 Waste Systems is a private company incorporated in
25 British Columbia in 1993. We started ATD to look

1 for a vegetable waste/landfill solution, but when
2 we were told that the hog industry had a much more
3 pressing problem, we adapted our expertise to this
4 new challenge. Suffice to say, it has been a long
5 and fascinating learning experience.
6 ATD has created a hog manure recovery
7 system that eliminates environmental concerns and
8 resolves nutrient balance problems to finally
9 allow a vibrant and sustainable hog industry to
10 move forward.
11 The system makes a dry fertilizer,
12 clean water, and it works because it takes manure
13 straight from the barn.
14 We've obtained two patents, and are
15 pending on a third, and have been assisted along
16 the way by the University of B.C., Chemical
17 Engineering Department, Hipp-Anvil Engineering
18 Ltd. of Vancouver, the North Carolina State
19 University, and members of their staffs.
20 Here are the targets we set for the
21 system.
22 First, we recognized that we had to
23 develop an environmentally sustainable and
24 economically viable system. The environmental
25 issues were simply set at not discharging to the

1 environment. The drive to economic viability was
2 more troublesome. While odour reduction was
3 largely achieved, we found that by itself it could
4 not provide the returns we needed. So, we
5 developed an integrated approach that, while more
6 costly, provided the investment returns that make
7 it viable. We also identified some value-added
8 benefits that are not included in those returns.
9 Secondly, we wanted to install the
10 system on any farm, in any climate, and it had to
11 be easy for an operator to use. That meant
12 finding processes and equipment used in other
13 industries so we could utilize their experience to
14 make things easy to operate. We tied them
15 together in an operating system that can prompt an
16 operator and be remotely monitored by ATD to keep
17 it running efficiently. We had to buy what we
18 needed off the shelf from suppliers that could
19 support us anywhere in the world and make things
20 easy to repair. That's where we found that old
21 technology can be applied to new problems. It
22 seems to be true that there is nothing really new
23 in the world. They are just being rediscovered.
24 Lastly, because of the weather, and a host of
25 other reasons, we wanted to avoid anaerobic

1 treatment. Well, we did that.
2 In terms of viability, we had to get
3 an idea of an operator's current costs so that a
4 comparison to our system could be made. There
5 were some surprises along the way, for example,
6 nitrogen losses in long-term storage were one,
7 water consumption was another, and now new
8 phosphorus rules and expansion are creating
9 nutrient imbalances for some.
10 We recognized that each operation
11 would be unique. And because of that, we
12 developed a spreadsheet that reflects the
13 engineering characteristics of our system and its
14 costs, thus allowing us to customize a solution
15 with an operator's information to get an estimate
16 of the potential costs and benefits before any
17 commitments are made. I will give you some
18 ballpark figures as to costs later and explain how
19 it works as we go along.
20 It would be nice to think we could
21 just compare the two costs, an operator's and
22 ours, and make a decision. But in putting a total
23 solution together, we found that such a comparison
24 was going to be difficult. We had created a major
25 new approach with benefits that could only be

1 valued by the operator.
2 So, while the quantifiable items are
3 largely dependent on the individual operation, I
4 would ask for the moment that you accept that:
5 You won't need manure storage facilities.
6 You won't be disposing of manure slurry.
7 You will use less water.
8 You will produce fewer odours and improve air
9 quality.
10 You will do it on the land you have - even expand
11 on it!
12 You will capture more nutrients.
13 You will reduce greenhouse gases.
14 You will be supported by ATD, long term.
15 Now, with all that in mind, I would ask that you
16 put a value on these other benefits. Yeah, find
17 me one, there you go.
18 Regulatory permitting process is
19 simplified. Reduced odours and water consumption,
20 coupled with the elimination of potential threats
21 to the environment by manure storage facilities
22 and land disposal, will help the permitting
23 process proceed. A strong presentation at public
24 hearings will now provide a positive opportunity
25 to reinforce an operator's commitment to the

1 environment and stewardship of the land.
2 Reduced odours. How do we do it?
3 There are two major components in the odours
4 people complain about, ammonia and the by-products
5 of anaerobic activity. The ATD solution is to
6 stop odour production before it begins.
7 Ammonia is cautioned by enzymes
8 produced by bacteria in feces attacking urea in
9 the urine. By using conveyors at rest, we
10 separate the feces and their bacteria from the
11 urine in the barn and move the urine out
12 immediately. This allows the feces to dry
13 aerobically until the end of the day when the
14 conveyor belt is scraped clean, drastically
15 reducing ammonia production and preserving urea.
16 All manure is treated within 24 hours.
17 Low ammonia means:
18 Improved health for the animals and staff.
19 Lower vet bills.
20 Lung lesions reduced or eliminated.
21 Better feed conversion and earlier to market, some
22 say as much as three days.
23 The other major components of the
24 odour are produced by anaerobic activity. Prompt
25 removal and treatment just doesn't allow that to

1 happen. There will be no hydrogen sulfide safety
2 concerns.
3 We aren't perfect! Barn smells will
4 continue to come from evaporation on the floor,
5 the animals themselves. We still discharge to the
6 air. Changes to barn ventilation can direct
7 exhaust to a biofilter or other odour-destroying
8 equipment. Our burner has been designed for
9 biomass fuels, we use feces, with discharge levels
10 well below the current regulatory requirements.
11 We also discharge moist air from the dryer, which
12 is directed to our only biological treatment
13 facility, an all-weather biofilter.
14 Liquids are treated by membrane
15 filtration, heat, pH shock and UV radiation to
16 ensure pathogen-free water for reuse. Your feed
17 and wash-down water volume will be cut in half to
18 reduce costs as water becomes more expensive and,
19 in some cases, in short supply. The system can be
20 configured to handle irrigation with reduced
21 suspended solids.
22 Computer-assisted operation. The
23 system components are tied into a monitoring
24 system that ATD can monitor remotely, should it be
25 required. System prompts help the operators

1 respond to any action that may be called for.
2 Pellets will carry the analysis
3 provided by the herd, but can be supplemented as
4 required. They are sterilized by the heat of the
5 dryer and will be weed-free. By exporting surplus
6 nutrients, hog density can be increased on the
7 same acreage while maintaining a nutrient balance.
8 Better crop fertilization. Nutrients
9 can be applied more accurately and conveniently,
10 with pellets having a consistent analysis and a
11 high organic content.
12 More heat. Hot water heating is
13 available for barns or residential use as a
14 by-product of drying.
15 A new brand is created.
16 Environmentally sound management should receive
17 market endorsement and a better return. This is
18 the differentiation exporters are looking for as
19 part of their "Canadian" brand.
20 Easier to find staff. New recovery
21 techniques, better air, cleaner surroundings will
22 encourage farm employment.
23 Should an opportunity to relocate
24 present itself, as a neighbour who doesn't stink,
25 doesn't discharge to the land or water, and

1 conserves water, you can locate closer to a feed
2 mill or packing house to reduce transportation
3 costs, a major item.
4 Reduced footprint. New operations
5 will no longer need disposal acreage or manure
6 storage facilities. Employ that capital to
7 capturing nutrients in pellets and increasing
8 populations.
9 There may be other biomass fuels
10 available that are under-utilized, for example,
11 flax and hemp straw.
12 New sources of revenue. Greenhouse
13 gas reduction credits and fertilizer sales provide
14 stable cash flow that is not affected by the hog
15 market, providing some shelter from market swings.
16 Money used for current manure recovery can be
17 redirected. Litigation may be avoided.
18 Dietary changes can be refocused.
19 With odours and manure nutrients under control,
20 dietary changes can be directed to the production
21 of meat, rather than environmental impact.
22 With the odours associated with manure
23 storage facilities and their management eliminated
24 and barn odours reduced, the negative impact of
25 those old features can be reversed.

1 So, in summary, our targets were:
2 No discharge to the environment. As there is no
3 manure storage facility, nor land disposal, we
4 have eliminated them as sources of potential
5 trouble, while reducing greenhouse gases by more
6 than 65 percent. With anaerobic activity
7 eliminated, then so are greenhouse gases, no
8 matter how they are going to be measured. All
9 water is now either part of the pellet or water
10 vapour exhausted to the biofilter, while the rest
11 is cleaned for recycling to the barns. All solids
12 and materials used in the process find their way
13 into the pellet, including the ash from the
14 burner.
15 There is no new technology. We have
16 found a new way to use the existing technology.
17 Economic viability: By eliminating a
18 manure handling cost center in favour of an
19 investment in a new fertilizer manufacturing
20 business. By creating new revenue streams from
21 fertilizer and greenhouse gas emission credits,
22 this vertical integration and diversification
23 places a safety net under hog market prices.
24 The capital budget estimates for a
25 10,000 place grow to finish facility in Canada

1 runs in the area of $5 million, with payback in
2 less than 11 years. This is approximately
3 equivalent to 6,800 sows, farrow to wean, 53,000
4 nursery pigs, 5,000 sows, farrow to feeder, and
5 1,300 sows, farrow to finish. A 20,000 place
6 finisher in Canada comes to about $7.5 million,
7 with payback in about 7.5 years, excluding
8 interest costs. This capital outlay sounds like a
9 lot, but remember there are four sources of
10 revenue.
11 There is the sale of surplus
12 fertilizer, the sale of greenhouse gas emission
13 credits, recovery of current manure managements
14 costs, and avoidance of future manure management
15 costs. These four cash flows, and the tangible
16 results from the value-added benefits I spoke of
17 earlier, will turn a manure management cost center
18 into a profit center.
19 Over the last few years, when people
20 have raised objections to hog farms, I have often
21 said that there is light at the end of the tunnel.
22 Well, today we are out of that tunnel, and it is
23 now up to us to move ahead as fast as we can.
24 Now, I would like to discuss the
25 process in a little more detail.

1 THE CHAIRMAN: Can we not have
2 conversations in the audience, please?
3 MR. SLYKE: I'm sorry, I didn't hear
4 that.
5 THE CHAIRMAN: I was just asking that
6 nobody carry on conversations in the audience.
7 MR. SLYKE: Okay.
8 THE CHAIRMAN: You may proceed.
9 MR. SLYKE: I think, starting here
10 with the barns, remember we've got two streams,
11 urine and feces. Let's follow the -- isn't that
12 funny. Okay, let's take the liquid stream here,
13 the urine stream first. Starting with the
14 conveyors in the barn, the unique shape and slope
15 of the conveyor at rest allows the urine to drain
16 immediately into the pipeline that will take it to
17 the treatment building where, after some
18 pre-treatment, it will be passed through the
19 membrane filter. If necessary, the filtrate will
20 then go to an ammonia extraction process, which
21 uses heat and pH to remove the ammonia and convert
22 it to ammonium sulfate, which will eventually be
23 added back to the solids prior to drying.
24 The liquid is then passed through the
25 ultraviolet radiation process, pH adjusted and

1 cooled before being returned to the barns, where
2 it will be mixed 50/50 with your normal feed water
3 supply. The pH adjustment is done with lime,
4 which eventually finds its way into the pellet,
5 along with some sulphuric acid, which brings the
6 pH down to normal range.
7 Now the feces path: Having allowed
8 the feces to remain exposed to air circulation for
9 up to 24 hours, the conveyor is rotated and
10 scraped. This will take about five minutes or so
11 each day. The feces are dropped into a bin, which
12 is transferred to the treatment building to be fed
13 into the dryer to produce fuel for the following
14 day. As soon as that is done, the lime sludge,
15 burner ash and ammonium sulfate are added to the
16 remaining feces to be dried and pelleted. The
17 pellets are then moved into bulk storage.
18 We expect a 10,000 head operation to
19 produce about 2,500 tons of pellets per year, with
20 an NPK of about 10-8-7, with sulphur at 4, calcium
21 at 4 and magnesium at 1.4. And that should sell
22 for about $200 a tonne, based on equivalent
23 chemical prices.
24 Bulk chemicals are lime and sulphuric
25 acid, which are consumed and find their way into

1 the pellet. We took measurements of the nitrogen
2 available on manure discharged fresh from the barn
3 and compared it to the nitrogen left when the
4 storage facility was pumped and distributed. That
5 is where we found a substantial loss of nitrogen,
6 close to 70 percent, which confirmed other
7 studies.
8 As you can see, there will be no
9 further need for flushing. So if you are flushing
10 now, we can reduce your water consumption by more
11 than 50 percent, and pumping costs are reduced
12 accordingly.
13 Ammonia in the barn will be
14 substantially reduced, and what little anaerobic
15 activity occurs is internal to the feces itself.
16 The dryer uses biomass, the feces or some
17 alternate that might be available, and while
18 generating carbon dioxide, it does not count
19 against us in determining CO2 reduction. Within
20 the next few months, we may finally have some idea
21 as to the remission credits that may be available,
22 and the extent that a fair market price be
23 obtained for them.
24 While the industry is coming to grips
25 with increased pressure on both the economic and

1 environmental fronts, we have been active in
2 obtaining credibility for our product. We have
3 been short-listed by the North Carolina State
4 University to supply up to four conveyor systems
5 to their experimental hog facility. Our patent
6 application is currently being reviewed, and we
7 expect approval any day now.
8 So, in conclusion, you may have found
9 our website and will already be aware that we are
10 searching for a demonstration site. Hopefully, it
11 will be an operator who has 4,000 to 10,000 head
12 in a reasonably small area who wants to expand and
13 needs a solution to his problems. In Canada, we
14 propose to build a 10,000 head treatment facility,
15 at no cost to the operator, but with his promise
16 to buy it at a discount, to be negotiated if we
17 pass agreed milestones. As attractive as that may
18 sound, we have no applicants at this time. The
19 reason is simply "risk avoidance". Operators will
20 not take on significant debt, no matter what the
21 payback is, until the concept is proven. In other
22 words, no one wants to be first.
23 The answer is to use the approach that
24 worked for Denmark in their adoption of biogas
25 plants. Let me quote from a presentation by Bruno

1 S. Neilsen at the 2007 Banff Pork Seminar, and
2 reported in their Proceedings, pages 237-243:
3 "From the outset, the plants had to be
4 commercially viable. Their economy
5 was based on energy sales. Through
6 the 1980's and 1990's, the development
7 was promoted through a close
8 public-private co-operation. This
9 included public funding for research,
10 development and up to 40 percent
11 investment grant in full-scale
12 demonstration plants. The subsidy for
13 investment in biogas plants was
14 gradually reduced from 40 percent to
15 20 percent, and has been reduced to
16 zero by the government."
17 This is how new technology can be
18 jump-started in our industry, a one-time reduction
19 in capital cost that allows an operator to choose
20 the technology that works best for him, while
21 providing the public with measurable and immediate
22 results in terms of reduced environmental risk and
23 impact, conservation of resources and an expanding
24 agriculture sector economy.
25 And that concludes my presentation.

1 THE CHAIRMAN: Thank you, Mr. Van
2 Slyke. So you don't have one of these in
3 operation at the present time?
4 MR. SLYKE: That's correct.
5 THE CHAIRMAN: Do you have models that
6 you've used?
7 MR. SLYKE: Well, as you can imagine,
8 you can't do this on a small scale. But, yes, we
9 have done field trials on some aspects, lab work
10 on other aspects. And a lot of it is just lifted
11 right out of engineering textbooks. So the
12 challenge to us now is basically to connect the
13 pieces. But we've worked with the engineering
14 people at UBC and the Hipp Engineering people in
15 Vancouver. They have designed it for us. They
16 have laid it out. We have produced mass balances.
17 We know how much energy is going to be used and
18 that kind of thing. So we're pretty confident on
19 the hardware and what it will do.
20 What we're not confident about, and
21 this is why our demonstration period is set ahead
22 about two years, is the measurements of how much
23 material has to be processed. With every
24 operation that we've been to, it's been almost
25 impossible to determine how many gallons of manure

1 are produced a day and what the solid levels of
2 that are. Every operations a little different.
3 And, of course, with the different mixes from, you
4 know, sows to weanlings to whatever, all of that
5 changes a little bit.
6 So we want to take our demonstration
7 site up basically one step at a time, build it,
8 put it together, get our measurements, go the next
9 step. And we think by the time we have done that,
10 and gone through several seasons to make sure
11 there are no seasonal variabilities that we
12 haven't contended with, that we have pretty well
13 gone through 18 months to two years.
14 THE CHAIRMAN: Are you close to
15 finding a demonstration site?
16 MR. SLYKE: I'm sorry?
17 THE CHAIRMAN: Are you close to
18 finding a demonstration site yet?
19 MR. SLYKE: I've got two people in
20 Manitoba who said they would like to be number
21 two. I have got one fellow in Alberta who we just
22 started talking to, and I'm just not certain what
23 he is going to be doing. So I think we have got
24 some interest. And if I can find a way to get
25 that bridge financing to build the first one, that

1 would kick-start it.
2 THE CHAIRMAN: And is this the type of
3 technology that, once it's proven and in place and
4 mass produced, the price will come down?
5 MR. SLYKE: Probably not by very much.
6 There are some things that will come down just
7 because we can buy more than one. You know,
8 actually, when we first started this, one of our
9 biggest problems was to find stuff that was small
10 enough. The ammonia extraction, that kind of
11 thing, they build these things in massive sizes.
12 And 10,000, 20,000 head farm doesn't need anything
13 that large. We have had a struggle to get smaller
14 versions.
15 And the other side of that particular
16 coin was that if we could find a way to reduce the
17 break-even point for an operation, for this kind
18 of thing to be adopted in any way, we can get down
19 to the smaller farms. But right now the economics
20 suggest to us that there is a certain volume that
21 we're going to need to process in order to make it
22 fly. And, of course, that's without any subsidy
23 or anything like that. Give me a subsidy and I'll
24 change my numbers.
25 MR. MOTHERAL: This is probably on the

1 technical side a little bit. You have produced
2 pellets? You have produced pellets, have you?
3 MR. SLYKE: No.
4 MR. MOTHERAL: You haven't produced
5 anything yet?
6 MR. SLYKE: No.
7 MR. MOTHERAL: This is all a
8 conception?
9 MR. SLYKE: Yes.
10 MR. MOTHERAL: So I was looking at
11 your analysis or hope that it would be 10-8-7,
12 that's your analysis of your fertilizer. And at
13 $200 a tonne, from just a quick calculation, it is
14 probably -- per pound of actual nitrogen, it is
15 probably twice as expensive as chemical
16 fertilizer.
17 MR. SLYKE: Well, the calculation of
18 MPK on the finished product is complicated
19 somewhat by the amount of feces that we burn
20 ourselves to make the heat that we are going to
21 need to dry the rest. So some of your solid
22 material coming from the barns is going to be used
23 as fuel. Now, that all changes if you can find
24 some other biomass to use in the dryer. So you
25 lose some of your solids in the burner, that's

1 true. But to the extent that we can pull some of
2 that nitrogen off as ammonium sulfate, we sort of
3 stockpile that while we're making fuel. And then
4 when we get to pelletize the balance for the day
5 all, of the add-ons come back on to that. So it
6 tends to boost the analysis up for that to that
7 point of view.
8 MR. MOTHERAL: More or less I was
9 questioning the price of $200.
10 MR. SLYKE: Price. Well, what we did
11 is I think that $200 price that I'm quoting right
12 now is based on some Manitoba -- where was it?
13 Steinbach, Manitoba, there is a fertilizer, a
14 chemical fertilizer supplier somewhere around
15 there, and they have been giving me current
16 fertilizer prices. And I've been taking those,
17 extracting the nitrogen price, the phosphorus
18 price, the potassium price and then relating that
19 back to what our analysis is going to be, and
20 that's how we got to the $200.
21 MR. YEE: Just one question. You
22 mentioned in your treatment of your urine strain,
23 prior to the membrane filtration you mentioned
24 that there would be some pre-treatment. What sort
25 of pre-treatment would that be?

1 MR. SLYKE: Well, some of that is a
2 little bit on the proprietary side. But
3 essentially what we want to do, in order to make
4 the membrane system work as effectively as we
5 wanted, it was a matter of size. And when we say
6 productivity, on the -- when you process anything
7 through a membrane, you basically have git one
8 incoming stream and two output streams, so one
9 will be called the concentrate and the other is
10 not. Well, if you aren't careful, you wind up not
11 getting a very good job the first time around.
12 So what we found out, in the end, and
13 this was done real, by the way, in a lab down in
14 California, because we couldn't do it in Canada.
15 We had to get some urine from North Carolina State
16 University that they had collected for us, ship it
17 across to California, some membrane people there
18 developed a system for us to keep the size down by
19 essentially running the urine through the darn
20 thing twice in the same day, but to pre-heat the
21 urine to make the membrane more effectively.
22 And we also add a little bit of
23 chemical there that helps us keep the potassium
24 separated as well. Because that was a big problem
25 with the membrane systems, potassium just seems to

1 leak through just about everything, so we had to
2 doctor it up a little bit that way. But, yeah,
3 it's a tricky part of the business. But that's
4 the part that we actually did live.
5 MR. YEE: Are there any residues from
6 the treatment process that have to be dealt with
7 separately?
8 MR. SLYKE: I am not hearing you very
9 well over here.
10 MR. YEE: Oh, sorry, are there any
11 residues from the treatment process?
12 MR. SLYKE: Any residues?
13 MR. YEE: Yes.
14 MR. SLYKE: No, not that I've
15 determined up until now. All of the bulk
16 materials that we buy go right into the pellet or
17 are used in modifying pH backdown, that kind of
18 thing. Even -- well, I suppose, in the long run,
19 one might look at the membrane cartridges and say,
20 yes, sooner or later you will probably have to
21 replace them, but that's about the only other
22 thing. From a consumer point of view, no,
23 everything goes into the product.
24 THE CHAIRMAN: Thank you very much,
25 Mr. Van Slyke.

1 MR. SLYKE: Thank you.
2 THE CHAIRMAN: I wish you well in
3 this. It sounds like a very intriguing and
4 potentially very positive initiative. And I hope
5 you can find some way to bring the price down a
6 little.
7 MR. SLYKE: Well, that would certainly
8 be nice from everybody's point of view, yeah.
9 That's what they said in Denmark.
10 LINDY CLUBB, representing Wolfe Creek Conservation
11 Group
12 THE CHAIRMAN: Thank you. Lindy
13 Clubb. Miss Clubb, would you state your name for
14 the record, please, and the commission secretary
15 will administer the oath?
16 MS. CLUBB: My name is Lindy Clubb.
17 LINDY CLUBB, having been sworn, presents as
18 follows:
19 THE CHAIRMAN: You may proceed.
20 MS. CLUBB: I represent a 20 person
21 group called Wolfe Creek Conservation. It's named
22 after a tributary to the Assiniboine River. Our
23 mandate is to keep the water clean as it enters
24 our local lakes, rivers and streams. It comes
25 from pristine sources inside Riding Mountain

1 National Park. The water coming from the park is
2 clean because they have restrictions on harmful
3 development. We're in southwestern Manitoba.
4 We believe that intensive hog
5 operations are incompatible with our environment
6 and could contaminate our water. We've lived with
7 the smell of manure in our nostrils, and we have
8 all raised hogs in barns. We know how powerful
9 their waste is. We have lived with some
10 environmental degradation from feed lots and
11 smaller barns, but we haven't yet lived with an
12 intensive hog operation, nor do we want to.
13 We consider our air, water and soil
14 unsuitable for large concentrations of hog manure.
15 We have high water tables and slopes, frequent
16 potholes and abundant wildlife in our area. It's
17 mainly mixed farming.
18 Our councillors are small business
19 owners and sausage makers who oversee road
20 maintenance and zoning applications, hardly the
21 experts needed to collect and review information
22 on licence conditions to prevent pollution from
23 huge hog operations.
24 So as community volunteers, this is
25 our story: Around 2003 a land owner on the

1 Menzies Road applied for a permit to put a large
2 hog barn on his property. It was a 2,500 sow,
3 farrow to nursery, 210 grower to finisher
4 operation. The proponents required approximately
5 22-gallons of fresh water per day, per pig for
6 washing, drinking, cooling and domestic use. That
7 amounted to millions of gallons of water per year.
8 There are more than 20 neighbouring
9 farm families that share the same supplies. The
10 use from this one hog barn was enough to lower the
11 nearby water table, that was our first concern. I
12 mean, in 2005 the groundwater was so saturated in
13 our area that digging a six inch hole would bring
14 bubbling water up to the surface. So if manure
15 was injected in the soil that year, it would come
16 up and run off.
17 Last year we had a year of drought.
18 And we can safely assume that millions of gallons
19 of water didn't enter the aquifer for recharge,
20 but recharging the aquifer was left out of the
21 topics discussed during the hearing process.
22 The proposal proceeded in the absence
23 of information about our local water, and in the
24 presence of our policies in Manitoba that don't
25 call for efficiency or conservation. Instead,

1 it's all about supply. That's our regulatory
2 environment.
3 There were very few studies in place
4 for the Odanah Shale Aquifer, which were older.
5 But we knew of an uncapped well on the property,
6 which is an entry point for groundwater
7 contamination. So I started talking to Bob
8 Betcher, who is our provincial groundwater expert.
9 He's not here in his socks today, so I can say
10 anything I want, can't I? I asked: What would
11 happen if the toxic waste from the hog manure, for
12 instance, got into the aquifer? He said the
13 aquifer was like a big lake beneath us and it
14 circulated, and it could go moving from two to
15 fifty miles per hour, so contamination was
16 impossible to track.
17 We attended the hearings for the
18 proposed hog barn and were assured the proponent
19 would cap the well as a gesture of good will. It
20 hasn't been capped yet. The spread fields for the
21 waste were another point of entry for pollution.
22 We have predominantly clay soils, with some sand
23 and gravel lenses that is allow penetration for
24 aquifer recharge. No one is testing their soils
25 enough, we were told. One to four tests per

1 section is inadequate. Soils can change texture
2 and composition and nutrient content within
3 inches. But soil tests are expensive. So in our
4 province, and in our sections, we test once and
5 hope for the best.
6 The councillors refuse to do more soil
7 tests, even though we asked for it. And they
8 refused to make the test results, if they have
9 been done, public as a condition for the operation
10 of this proposed hog barn. Why? Because it's an
11 added cost and it's not our custom to do it.
12 So we had no assurance as a community
13 that aquifer recharge areas were to be located and
14 protected from contamination. Although, I don't
15 think it's unreasonable to expect minimum
16 precautions to be taken and back-up plans to be in
17 place for any kind of operation. I mean, I do it
18 myself. How much would it cost for us to clean up
19 an aquifer?
20 And that's where we started to feel
21 let down by the community conditional use process.
22 After hearing all of the ways an accident could
23 happen, council asked for a performance bond from
24 the proponent. The applicant withdrew. It was
25 acceptable to make a proposal when the community

1 could have paid for clean-up, but the proponent
2 wouldn't contribute to prevention or insurance for
3 any kind of a bad performance in the future. That
4 means that the proponent was looking at a profit
5 of such small a margin that he couldn't afford to
6 put anything into practice to help the
7 environment. We didn't think that was a good
8 idea.
9 Our council's motives for determining
10 this operation rested on possible economic gain,
11 certainly not on ecological costs. To prove that
12 it's a political process, there was an election,
13 with new councillors coming in the following year,
14 and the proponent reapplied with the original
15 permit, which brought a new round of suggestions
16 from us to prevent pollution. Performance
17 indicators were absent. Although they are in
18 place for a lot of businesses, why not this one?
19 Where is the evaluation of or assurances that a
20 manure management plan is followed? Because our
21 plans are only as good as they are put into place.
22 And in this case, manure management was not
23 confidence inspiring, let's say.
24 Council claimed the provincial
25 licensing departments were the experts and the

1 performance reviewers, but we uncovered huge
2 information gaps in that process. The Technical
3 Review Committee in Brandon gave the go-ahead for
4 spread fields for this barn and missed a critical
5 fact that Wolfe Creek runs right across them and
6 would carry toxic waste into our rivers. There
7 was no on-the-ground truthing. There was no
8 verification of the information given by the
9 proponent. Without local people being consulted,
10 the province isn't protecting the public's
11 interest. They certainly weren't there to protect
12 our interests.
13 Run-off to surface water is common on
14 our heavy soils on sloping land. And there were
15 issues of siting the barn. And we don't see
16 issues of siting the barn in the quest for
17 profits. Bonnie Nay, from Turtle Mountain
18 Municipality, writes:
19 "The Southwest Technical Review
20 Committee erred in their analysis of
21 the applicant's proposal for the
22 factory hog barn."
23 The Southwest Technical Review wrote,
24 and I quote:
25 "There are no rivers or municipal

1 drains in this area."
2 Wrong! There happens to be a major municipal
3 drain in this bog-like area called the Ninga
4 Channel. The Ninga Channel will drain seepage or
5 run-off of untreated sewage from the mega hog barn
6 site into the Pembina River, into the Red River
7 and, ultimately, into Lake Winnipeg.
8 If the province or councillor or
9 proponent wouldn't mitigate harm, then we tried
10 to. We recommended above-ground storage of manure
11 to avoid possible groundwater contamination. It
12 was turned down on the basis of expense. We
13 advocated for triple liners for in-ground storage.
14 And they work the best, but we have been warned
15 that liners only last for three years because of
16 the ammonia content and the waste; it wears the
17 membrane down. Seepage penetrates particles of
18 clay soil that line the lagoons, and it is a
19 common problem. But the proponents and our
20 council were willing to risk it for the sake of
21 cutting costs.
22 We asked for moats to line the lagoon
23 area, in case of floods, so the waste didn't get
24 washed downstream in spring melt or the sudden
25 frequent storms events that we get up there.

1 Farmers are often in the business of moving earth,
2 but this proponent didn't want to waste the time
3 looking after his own waste path, and our
4 councillors didn't see the value of a preventive
5 measure like that.
6 So, you know, in the end, we decided
7 it was to the advantage of the producers to
8 pollute. And they can do so since there are so
9 few inspectors. If it is necessary to cost cut to
10 that extent, what would happen to the industry if
11 we began charging for resources like water? How
12 long would the industry last? Not very long.
13 The hog farmers monitor themselves,
14 for the most part, since we only have one
15 inspector for the entire southwest area. He calls
16 the hog barns two weeks in advance and checks a
17 small percentage of the lagoons once a year.
18 Hardly matching in practice the principle, stated
19 by the Manitoba Pork Council, that land around hog
20 barns is more closely monitored than any other
21 farm land in the province, which to me now means
22 that other private land isn't monitored at all in
23 comparison.
24 Our next environmental concern was
25 odour. We discovered a good made-in-Manitoba

1 product called the Gulla Guard. It is a few steps
2 above the practice of spreading straw mulch over
3 the lagoon for odour control, but that was
4 dismissed as too expensive. So without odour
5 control, the six families in close range of the
6 barn smell and spread acres wouldn't be able to
7 work in their large gardens.
8 If Cassie Leganchuk, who rises at dawn
9 to work like ten men in her three gardens, gags
10 when she is out there, her family will go without
11 produce. The gardens produce food for every meal,
12 all year round.
13 If Matt Kowalchuk's lake stocked with
14 rainbow trout gets an algae bloom from
15 contaminated run-off, he goes without cash and
16 food.
17 If Roger Desilet's customers are
18 turned off by the smell, he loses the ability to
19 provide both his family and the community with a
20 lovely organic honey product, his main source of
21 income.
22 So how much of an advantage can it be
23 to the area and the environment? Hog barns reduce
24 environmental air quality. The techniques touted
25 by the industry, such as manure storage covers,

1 shower belt and ventilation systems, might be
2 available and effective, but they were avoided in
3 our situation as too costly an option.
4 Instead, we were faced with losing
5 customers, visitors and our own ability to travel
6 down the road that led to the beach. The onus of
7 proof is on the dissenters right now in the
8 community conditional use hearings. It was not an
9 easy process. And the onus was on us to prove
10 what we said, to offer up facts, which we did.
11 But the emphasis is certainly not on the
12 proponents in the industry to back up what they
13 are saying. It's backwards, the system right now.
14 And it's a disaster in the waiting, and the
15 premises are wrong. This is a question of scale.
16 When the applicant withdrew his
17 request for a barn permit the second time, it was
18 for economic reasons. In the intervening years,
19 in a climate of falling prices for pork, he
20 decided, with the opposition in the community, and
21 the falling prices, he wasn't going to go ahead
22 with the barn. That's the reason we don't have
23 one there. It certainly wasn't because of the
24 facts that we presented that our council
25 dismissed.

1 So if the profits for pork are based
2 on discounting the environmental costs, and
3 keeping what monitoring we do have a secret, then
4 we are not cataloguing the true costs of and to
5 our water, and this form of industry would be
6 over. Please recommend an end to the
7 proliferation of hog industries and their
8 expansion in our province.
9 THE CHAIRMAN: Thank you, Miss Clubb.
10 MS. CLUBB: You're welcome.
11 THE CHAIRMAN: Thank you very much.
12 Mr. Harold Froese.
13 MR. FROESE: Good evening.
14 Harold Froese, representing Manitoba Egg Producers
15 THE CHAIRMAN: Would you please
16 introduce yourself for the record, Mr. Froese?
17 MR. FROESE: My name is Harold Froese.
18 HAROLD FROESE, having been sworn in, presents as
19 follows:
20 THE CHAIRMAN: You may proceed.
21 MR. FROESE: Thank you. Thanks very
22 much for this opportunity to present. I would
23 like to present from two different perspectives.
24 I've been asked to present some ideas on behalf of
25 Manitoba Egg Producers. And then in the second

1 part, I would like to present some ideas in terms
2 of what I do in my own personal situation on my
3 own farm.
4 I should probably introduce myself,
5 because I think it will help to understand my
6 comments in terms of their perspective. I have
7 been -- I am a full-time farmer in the Oak Bluff
8 area just outside of Winnipeg. And I have been a
9 director on Manitoba Egg Producers since the
10 mid-1980s. I have also been a director on the --
11 the Manitoba director on the Canadian Egg
12 Marketing Agency for a number of years. And one
13 of my roles there is as chair of the Production
14 Management Committee, which deals with issues
15 similar to what we're talking about here for all
16 of the provinces in Canada, as well as animal care
17 and many other issues.
18 Firstly, what I would like to do, is
19 comment on behalf of Canada Egg Producers, and I
20 believe you have a copy of our submission.
21 There is approximately 160 egg farmers
22 in the Province of Manitoba. And we house
23 approximately 2.2 million hens on an annual basis.
24 The average farm size is 15,000 birds, which are
25 roughly 120 animal units.

1 One of the things that's been very
2 important to us as Manitoba Egg Producers, as an
3 organization, is sustainable agriculture and
4 strategic planning. Two of the key pillars of our
5 strategic plan are environmental protection, as
6 well as animal care.
7 And I should have mentioned also that
8 we view this very much as a partnership not
9 exclusive to egg producers. We view it as a
10 partnership with other aspects of the industry, as
11 well as various levels of government, because we
12 feel that we don't necessarily have all of the
13 answers. We are always looking for solutions,
14 trying to be proactive. And we look for input and
15 assistance from those other parties as well.
16 We are also strong supporters of the
17 Recommended Code of Practice for laying hens and
18 pullets, which was agreed to in 2003, and that
19 deals with all aspects of animal care in terms of
20 laying hens.
21 We also support the Livestock Manure
22 and Mortalities Regulation and the current draft
23 Nutrient Management Regulations under Water
24 Stewardship. There is also a very positive
25 comment that we would like to pass on to the

1 Provincial Government in terms of the process that
2 was followed in developing these Nutrient
3 Management Regulations. The process under the
4 three or four ministers, as well as their staff,
5 over about a year's time period, together with all
6 of the commodity groups, we found to be very
7 beneficial. I think we learned from each other.
8 And the resulting proposed regulations were in
9 support of them, and we think they are very
10 positive for all of Manitoba.
11 Some of the things that we have done
12 is we have tried to, again, as I said, be
13 proactive with our producers, encouraging them to
14 use the information that's available as they make
15 decisions in their own operations.
16 We have produced a Manure Management
17 for Laying Hens and Pullets brochure. We have
18 hosted an Environmental Farm Plan Workshop,
19 together with MAFRI, as well as PFRA. And we have
20 another, proposed dates towards the end of April,
21 again encouraging our producers to look at their
22 own specific situation and look at ideas as to how
23 they can be proactive into the future.
24 We have also significantly stepped up
25 our manure management education initiatives, in

1 light of the new phosphorous limits, the Red River
2 Valley spreading ban that has been proposed. And
3 we are trying to keep our producers abreast of the
4 situation so that they have time to think of the
5 changes they may or may not need to make to meet
6 those proposed guidelines.
7 We are holding a series of better
8 management producer information meetings. Part of
9 the reason we are doing this is we view manure as
10 a very valuable food source for crop production
11 within the province. We want to encourage
12 producers to use that manure in the most
13 beneficial way to produce crops, as well as to
14 sustain the soil that they spread the manure on.
15 Many of our producers are
16 recapitalizing or retooling their facilities as
17 they become older. And one of the things that
18 they are doing, again in response to changes that
19 are happening initially. A good portion of our
20 industry handled manure in the liquid form. And
21 by far, almost 100 percent, I can't say
22 100 percent, but virtually all of the producers
23 when they retooled, they went to a dryer manure
24 system. It is much easier to handle. The odours
25 that are present are much less with dry. It is

1 also a lot easier to spread on the land. And we
2 encourage them to monitor that, to test the
3 analysis of the manure, and to spread it in a
4 sustainable way that meets the guidelines.
5 And, of course, as they retool, we
6 also strongly encourage them to follow the
7 Recommended Codes of Practice which were approved
8 in 2003. That process was developed nationwide,
9 with the input of Canadian Federation of Humane
10 Societies, veterinary groups, consumer's
11 associations, and many other stakeholders as well.
12 Some of the recommendations that we
13 have, in terms of environmental sustainability, is
14 that we feel that livestock is only part of the
15 picture. In my own situation, I always thought
16 that my main concern in terms of sustainability
17 was the manure that my animals produce. Through
18 this process over the past year, and the
19 Phosphorus Committee recommendations in Winnipeg,
20 I began to realize that the waste I and my family
21 produce in my household is also an issue in terms
22 of sewage discharge.
23 Another thing that is also an issue
24 for all of us is residents, be it urban, rural,
25 wherever we live, is a simple thing, the type of

1 soap we use in our dishwashers. All of those
2 things contribute to the Lake Winnipeg situation.
3 Winter spreading of municipal and
4 human city waste in the Red River Valley is
5 another thing.
6 And I think as Manitoba Egg Producers,
7 what we would like to do is look for solutions for
8 all of us in the Province of Manitoba. And we, as
9 egg producers, definitely want to take
10 responsibility for our portion of that and to find
11 solutions for the province as a whole.
12 Land use planning, which has been
13 talked about today, of course, is another thing
14 that we strongly support. Proper siting, proper
15 maintenance of buffer zones is also he very
16 important.
17 Manitoba is a unique province, and we
18 want to keep it that way. And I think many of the
19 solutions, or most of the solutions, will be made
20 in Manitoba, which uniquely fit our particular
21 province.
22 And, of course, it's been stated
23 before, but to have approved data and analysis so
24 that on a going-forward basis, we can base our
25 decisions on good data is always beneficial for

1 the province.
2 So unless there is questions, I will
3 just continue. My own situation is somewhat
4 unique in the sense that I think a lot of my
5 thinking has been coloured by my experience as a
6 director on various boards. I have also had some
7 international experience in terms of trade
8 discussions at the WTO, and had exposure to many
9 different parts of the world. And I think that's
10 really encouraged me and my family to try and
11 translate how those messages from a global, to a
12 Canadian, to a provincial perspective, how that
13 fits on our particular farm.
14 Our farm is probably an interesting
15 one in the sense that it's on the west perimeter.
16 It is half a mile west of the Perimeter. When my
17 parents start that had farm in 1946, there was no
18 Perimeter. The city was a long ways away. You
19 have all come close to our place to join us, and I
20 think that's great, but we need to learn to live
21 together.
22 One of the things that has happened,
23 too, is I've never known a life without chickens.
24 I think that's great. Other people might not, but
25 I think that's fantastic. One of the things that

1 happened, which also encouraged my thinking, is
2 many years ago, when I was a very small child, the
3 City of Winnipeg, in terms of handling its own
4 waste, built the Charleswood Lagoon on the west
5 Perimeter. That lagoon is approximately two
6 kilometers away from my farm. And I also
7 mentioned the Perimeter Highway. This really
8 challenged my thinking because what approach
9 should we take? I could leave. I could protest.
10 I could do whatever. We chose the opportunity to
11 make a positive thing out of this and work for
12 solutions on behalf of the whole province because,
13 of course, we get the benefits of the City of
14 Winnipeg.
15 We soil test, virtually on an annual
16 basis, when we spread our manure to make sure that
17 we don't spread manure more than what the annual
18 uptake is of a crop. An aside to that is, I
19 mentioned the Charleswood Lagoon, in the 60 some
20 years that my family has been there, we have seen
21 absolutely no evidence of any kind of leaching
22 through the soil from the lagoon. We are, of
23 course, in heavy clay soils. Not that it was a
24 concern of ours. But the only change we have seen
25 in our soil is things that we have done ourselves,

1 in terms of the crops we have grown with the
2 manure, etcetera.
3 We have always been in the laying hen
4 business. In 1990, we had the opportunity to
5 expand in the chicken broiler business. And, of
6 course, chicken broilers are grown inside on straw
7 bedding. And that added to our operation. A few
8 years later, in 1999, 2000, somewhere in there, we
9 had the opportunity to expand the broiler business
10 once again, which created a challenge for us.
11 Because as well as the things I have mentioned,
12 the community of Oak Bluff is growing
13 significantly. And our farm is located
14 approximately a mile north of the elementary
15 school in Oak Bluff.
16 Economic reasons, biosecurity, all of
17 those things, some succession discussions my wife
18 and I were having, as we have a son who is
19 interested in continuing with the farm, encouraged
20 us to look at alternatives. We are in the R.M. of
21 Macdonald. With the rules that were in place, we
22 probably could have constructed another facility
23 to house the expansion.
24 We chose another route, the reason
25 being we wanted to continue being good corporate

1 citizens, together with our neighbours. We did
2 not want to cause any controversy. What we did
3 was we took our laying hens, and we combined them
4 together with several other producers and built a
5 brand new facility at a community called Dufrost,
6 which is east of Morris. Some of the things we
7 have done with that facility at Dufrost, because
8 it is over the 300 animal units, right from the
9 very beginning we looked very closely at the
10 siting. We made sure we were several miles away
11 from the community at Dufrost. We also made sure
12 that we were at least two miles east of the
13 highest point of water from the '97 flood.
14 We also built a facility that has dry
15 manure. We file an annual Manure Management Plan.
16 We test our manure on an annual basis. We make
17 sure we have more than enough acres from the
18 surrounding neighbours to spread the land. We do
19 soil tests on the land. We rotate the practice of
20 spreading the manure. The land owners tell us it
21 is a valuable source of natural fertilizer for
22 them. And we don't have any problem finding
23 enough acres and willing parties to take the
24 manure.
25 In terms of our farm back at home,

1 strictly now we are completely broilers. And what
2 we do is we have completed our own Environmental
3 Farm Plan.
4 We are also certified with Manitoba
5 Chicken Producers and their On-Farm Food Safety
6 Program. Some of the things that that involves,
7 we try and follow very strict bio-security
8 procedures. I have also been involved in working
9 groups nationally in terms of traceability,
10 bio-security programs, after the avian influenza
11 situation in B.C. in 2004. We don't allow people
12 into the barn. For example, when feed trucks
13 deliver feed, they deliver the feed, but they do
14 not go inside the facility. We have signage at
15 the entrance to the farm, a visitor stop at the
16 road. They don't drive up to the barn. So those
17 are some of the things that we do.
18 In terms of the manure, we again
19 handle it according to the On-Farm Food Safety
20 Program. We have arrangements are neighbouring
21 lands owners. And overall it's been a very
22 positive process.
23 One thing I'll mention, just before I
24 close, is I have mentioned we are residents of the
25 R.M. of Macdonald. About four or five years ago I

1 served on a Macdonald-Richot Planning Working
2 Group, where the councillors in those two
3 municipalities put together a group of
4 individuals. I represented livestock. We had
5 town people. We had many various backgrounds to
6 work on proper planning. And I think it was a
7 very successful process because we looked at the
8 municipalities in terms of where the streams and
9 rivers were, where the towns were, where the major
10 arteries were, and drew concentric circles for
11 potential livestock production.
12 And I would say, specifically in the
13 R.M. of Macdonald, it has worked extremely well.
14 We have I think in the neighbourhood of six hog
15 operations along the southern edge of the
16 municipality. If you know your geography, it's
17 the Village of Brunkild that is east of there,
18 between there and Domain. There are very few
19 residents around there. There is enough acres to
20 spread the manure.
21 And the owners of those facilities, by
22 and large, are local farmers who wanted to
23 diversify their operations. They were grains and
24 oilseeds farmers. And one of the families
25 involved in those farms has brought two children

1 into the business by expanding through livestock.
2 They are excellent corporate citizens, which
3 covers the way they inject the manure.
4 The other thing that has happened, as
5 a result of that, which is a sustainability factor
6 in rural communities. And as a parent who has so
7 far only exported one child to Alberta, hoping to
8 reduce that to zero in the future, these hog
9 facilities have provided a lot of employment for
10 the young people in the local area. Some of them
11 have taken up residence in the area. They have
12 developed a passion for livestock. They have
13 acquired residences in the area. We are a small
14 area and a few jobs means a big deal. So from the
15 human side of it, it has also been very
16 sustainable.
17 So I think with that I will close my
18 comments. If you have any questions, I look
19 forward to answering them.
20 THE CHAIRMAN: Thank you very much,
21 Mr. Froese.
22 MR. MOTHERAL: Just one. I realize
23 where your operations in Macdonald. Your combined
24 operation in Dufrost, which R.M. is that in Morris
25 or De Salaberry?

1 MR. FROESE: De Salaberry.
2 MR. YEE: Oh, just a quick question.
3 You mentioned you test your soils annually and you
4 have filed a Manure Management Plan?
5 MR. FROESE: Yes.
6 MR. YEE: I was just going to ask,
7 based on your notes, your average farm size is
8 15,000 hens which is roughly 120 animal units. I
9 thought you didn't have to file a plan unless you
10 were at 300?
11 MR. FROESE: No. I should clarify
12 that. 15,000, that's the average size for
13 Manitoba.
14 MR. YEE: Okay.
15 MR. FROESE: When we combined numerous
16 families into one facility, we are significantly
17 higher than the 15,000, so we are over the 300.
18 So we voluntarily did it, but it is also a
19 requirement as well.
20 MR. YEE: Okay, thank you.
21 THE CHAIRMAN: Thank you very much,
22 Mr. Froese.
23 MR. FROESE: Thank you.
24 Brandy Street, representing the Manitoba Livestock
25 Manure Management Initiative Inc.

1 THE CHAIRMAN: Brandy Street. Miss
2 Street, could you introduce yourself for the
3 record, please?
4 MS. STREET: It's Brandy Street.
5 BRANDY STREET, having been sworn, presents as
6 follows:
7 MS. STREET: Okay. Well, thank you
8 very much for having me here. Again, my name is
9 Brandy Street. And I am here representing the
10 Manitoba Livestock Manure Management Initiative.
11 So at the MLMMI, we've realized that livestock
12 operations may or may not be contributors to
13 nutrient in ground and water supplies. And
14 because of this, the government has brought in
15 regulations in place. And we currently have
16 regulations in place and will continue to have
17 regulations in the future.
18 However, our concern is we need
19 science-based best management practices in order
20 to enhance the environmental sustainability of the
21 livestock industry and make for more fair and
22 equitable regulations.
23 Our goal is:
24 "To allow Manitoba livestock
25 industries to achieve their full

1 economic potential through sustainable
2 growth."
3 And our mandate promises to do so by resolving
4 issues in manure management, promoting sustainable
5 manure management and developing best management
6 practices.
7 And if you notice here, the key word
8 seems to be "management", and that's because
9 manure is not simply a waste product of the
10 livestock industry. If managed properly, it can
11 be a very valuable resource.
12 So in order to attack this issue, we
13 plan on doing a few things at the MLMMI. Firstly,
14 to continue to pioneer efforts to investigate
15 solutions towards manure management issues from
16 both a practical and a research angle.
17 Secondly, to build on the initiative's
18 strong research base by implementing a
19 multi-faceted scientific approach that focuses on
20 practical, farm ready, and economically feasible
21 projects, along with existing basic research. The
22 key points here are that it has to be economically
23 feasible and something that can be applied within
24 Manitoba, or else it won't be adopted.
25 Thirdly, to create a communications

1 strategy that keeps the entire community informed
2 of the Initiative's activities. And there are a
3 few ways we plan on going about that. First off,
4 we have done quite an overhaul of our website. I
5 have done a lot of work myself, and have to say I
6 am very proud of it.
7 We also plan on getting out
8 newsletters in the near future, hopefully.
9 Brochures are in the works, fact sheets. So I
10 guess you have noticed that there are websites
11 along the bottom of these slides.
12 And last of all, to broaden the
13 Initiative's mandate by developing research
14 priorities that apply to multiple livestock
15 sectors and to promote the Initiative to these
16 other livestock operations.
17 The issues aren't solely with one
18 livestock sector. This has to be a team effort.
19 A number or all of the livestock sectors have to
20 get together as a team and be proactive in
21 attacking these issues.
22 So what exactly are the main issues of
23 concern? Well, first and foremost, phosphorus, as
24 I'm sure you are all aware, has been in the news a
25 lot lately, and we are putting regulations in

1 place. That is because there can be high input of
2 phosphorus in the soils in areas of high livestock
3 industry and in limited land base to sustain
4 livestock farms. If we apply too much manure to
5 the land, we can get leaching and run-off of
6 phosphorus into our ground and surface water
7 supplies which can, in turn, compromise water
8 quality and compromise the health of the aquatic
9 life and any life that depends on that water
10 supply.
11 Manitoba, our government, has put in
12 regulations restricting the level of soluble
13 phosphorus in the soil, which means we have to
14 restrict application rates of manure as well.
15 So at the MLMMI, we have done or
16 funded some research in the past in order to
17 combat this problem. We have ongoing studies in
18 phytase feeding. I am not sure if you are aware
19 or not, but phytase is an enzyme you put into the
20 feed. It sort of helps to more efficiently
21 utilize the phosphorus that's in the feed so that
22 the animal excretes less.
23 We have looked at the nature of
24 phosphorus in manure. We have done literature
25 reviews on the effects of phosphorus in the

1 environment. And currently we have projects
2 funded towards phosphorus saturation -- looking at
3 phosphorus saturation in Manitoba soils and a cost
4 assessment of proposed phosphorus management
5 regulations.
6 In the future, we would look at
7 funding research into new technologies and
8 practices that would reduce phosphorus loading in
9 the soils, and that can be done in a number of
10 ways.
11 First off, you could look at diet
12 amendments and, again, processing. For example,
13 different levels of processing of the feed that
14 would enable an animal to more efficiently utilize
15 the nutrients in the feed or adjusting nutrient
16 levels to better meet the animal's requirements.
17 Again, additives such as phytase or cellulase and
18 phase feeding, which is basically supplying
19 nutrients at a level to meet each stage of growth
20 of an animal.
21 You could also look at -- or, sorry,
22 look at manure management practices, alternating
23 handling systems or treatment of the manure to
24 reduce the levels of phosphorus. And improved
25 application methods and timing of the manure on to

1 the field.
2 Nitrogen management is another issue
3 sort of affecting the industry right now. The
4 LMMMR has regulations that limit residual nitrogen
5 levels to approximately 34-kilograms per hectare,
6 and that's regardless of crop species, on class 5
7 soils. These soils are prone to leaching of
8 nitrogen into water supplies just because they are
9 so porous.
10 However, there has been recent
11 research conducted that is saying that maybe these
12 limits are actually too low. Maybe it's possible
13 to apply more nitrogen to these soils without
14 increasing the risk of leaching if the land is in
15 a perennial forage system.
16 In the future, it would be a good
17 idea, from our point of view, I think, to fund
18 research that establishes loading rates of the
19 nitrogen for sandy soils and looks at best
20 management practices for annual and perennial
21 cropping systems.
22 Another issue with nitrogen that I
23 didn't really touch in on that previous slide was
24 dealing with ammonia emissions. We have heard a
25 little bit about that today. And we would also

1 look at funding research dealing with reducing
2 these emissions that, again, could be done with
3 diet amendments, different manure management
4 practices. Barn cleanliness is one way of
5 combatting this problem. Looking at different
6 manure storage facilities or ways of storing
7 manure. And technologies related to improved
8 field application methods.
9 Currently we also have a study going
10 on looking at best management practices to improve
11 environmental sustainability and productivity of
12 grassland systems using hog manure.
13 And the other issue of sort of the
14 most concern right now, or I guess the third of
15 high concern right now, is odour management. And
16 we have heard a little bit about that here today
17 already. It is a cause of very poor perception
18 and acceptance of the livestock industry from
19 nearby residents. And it seems that the hog
20 industry sort of takes the brunt of the blow with
21 this issue.
22 People tend to associate odours with
23 maybe a concern of health and safety, aside from
24 the fact that it is just a nuisance problem. So
25 it is very important to address this issue just to

1 improve public perception and increase acceptance,
2 which would allow for expansion of the industry.
3 And maybe look at more research into improving the
4 industry as a whole so that people would be more
5 accepting of it.
6 To date, we have funded research
7 looking at odour emissions from hog operations, as
8 well as the negative air pressure technology for
9 controlling odour from manure storages.
10 In the future, technologies and
11 practices that would effectively reduce odours
12 would be, in our minds, good projects to look at
13 funding. And this can be done in a number of
14 ways. Best management practices for barn
15 cleanliness, again dirty animals or dirty
16 facilities can contribute greatly to odour in a
17 barn.
18 Improved manure handling or management
19 systems, so covers, slurry additives or just
20 different storage systems in general.
21 On-farm odour reduction strategies,
22 such as the building of shelter belts and
23 windbreaks. That would simply just filter the
24 odour upwards into the air, and that way
25 surrounding farms wouldn't smell as much of that

1 from the livestock operation.
2 And then improved manure application
3 methods and timing. Again, it comes down to, for
4 example, would you spread manure, broadcast
5 spreading, like just spreading it on top of the
6 land, or incorporating it into the soil.
7 Incorporating it would reduce the odour and
8 ammonia emissions. Or timing, for example, a hot
9 sunny day compared to a cool cloudy day, where you
10 would have a lot more odour on the hot sunny day.
11 So to recap, research aimed at
12 reducing environmental risks to ground and surface
13 water and soils. Reducing the risk of soil
14 degradation. Reduction of odour and emissions.
15 And production of valuable by-products such as
16 energy, compost and fertilizer provide that odour
17 or other undesirable emissions would be reduced
18 would be funding priorities for the MLMMI. And it
19 is important to point out that technologies that
20 are economically feasible, likely to find
21 application in Manitoba or likely to benefit
22 Manitoba agriculture are key to us at the
23 Initiative.
24 To date, we've heard 192 projects or
25 applications for funding, of which we've funded 57

1 of them. Total funding is at about $4.4 million,
2 of which the MLMMI has funded nearly $2.8 million.
3 So the difference would come from the project
4 performers themselves or from matching funds.
5 And the type of projects have
6 fertilizer value, odour abatement, water quality,
7 infrastructure acquisition, to name a few. If you
8 are interested in a little more detail on the
9 projects themselves, you can always check out our
10 website at manure.mb.ca.
11 So to conclude, since our
12 incorporation in 1998, the MLMMI has worked
13 towards fostering research to enhance the
14 sustainability of the livestock sector. However,
15 our concern, again, is with the existing and
16 upcoming legislations and regulations that they
17 just be based on good science. And earlier there
18 was a question about, well, what makes good
19 science? Again, that comes down to peer reviewed
20 science. Is this something that your peers in the
21 industry would accept as good practice?
22 So with the involvement in the
23 research of the MLMMI, that would enable the CEC
24 to take a proactive role and sustained leadership
25 in addressing the research needs of the livestock

1 industry in regards to environmental stewardship.
2 And with that, I would like to thank
3 you very much for your attention, being pretty
4 much, I think, the last in the evening and open
5 the floor for any questions.
6 THE CHAIRMAN: Thank you, Miss Street.
7 MR. MOTHERAL: Thank you. And I know
8 we are going to hear more on this particular
9 issue. I can't get my head around it yet. And
10 it's to do with the phosphorus again. And I am
11 almost ashamed to say that I have a degree in
12 agriculture, although it was a number of years
13 ago. There is a lot of things I still don't
14 understand. Maybe I didn't then either.
15 But the whole business of, it came up
16 again today, with there being allowed 800 pounds.
17 And then, of course, I have heard it in parts per
18 million and things like that of the residual
19 phosphorus left and what's allowed. And I know
20 that we need to get more information on what's
21 available, what's soluble, what's residual. And I
22 know it's too complicated for you probably to
23 answer right now. But there is a need, I think,
24 for our commissioner, and we have talked about
25 this, we have to get this straight in our heads.

1 And I see Dr. Braggs there probably wondering did
2 I ever learn anything in university?
3 I know that it's -- I haven't got it
4 straight in my mind yet. You know, I know that
5 plants require so much P2O5, and they will use
6 that up. But is there going to be some in there
7 that's not available. Somebody today said they
8 were up to 800-pound. Isn't that what was quoted,
9 800-pounds? And I need some conversion factors
10 and what's available and what's not.
11 MS. STREET: Well, that I would
12 definitely have to get back to you on.
13 MR. MOTHERAL: Okay.
14 MS. STREET: But I will do that.
15 MR. YEE: Maybe a couple of questions.
16 One is a follow-up to what Wayne had just asked.
17 It was mentioned earlier on, I think it was
18 earlier on this afternoon. We understand the
19 nutrient budgeting and that there is -- you look
20 at the amount of nutrients in the feed and you can
21 do a mass balance in terms of what's fed to the
22 animals and what comes out. But my understanding
23 in discussions with Manitoba Conservation is that
24 there are better methodologies of calculating
25 loading to land and areas to better manage the

1 phosphorus and the nitrogen in the soils. That's
2 a project that might be worthwhile for your group
3 to undertake. I am just looking at your research
4 initiatives, so maybe just a comment on that.
5 And the other thought I had was, and I
6 noticed you're creating a community communications
7 strategy. And you mentioned newsletters and
8 brochures. I am just wondering, does that include
9 your research projects in terms of sort of
10 summaries of your findings and information that's
11 coming out your research projects?
12 MS. STREET: Well, all of the results
13 of the research proposals, or of the research
14 projects, the final reports and a summary are
15 provided on the website, so you can find that
16 information there. The newsletters would contain
17 probably a summary on the most recently completed,
18 and would probably come on a quarter or an annual
19 basis. So it wouldn't necessarily include them
20 all, depending on how many, you know, have been
21 completed, but yes.
22 MR. YEE: Thank you.
23 THE CHAIRMAN: Thank you very much,
24 Miss Street. Is there anybody else who wishes to
25 make a presentation this evening? Seeing none, I

1 thank you all for coming out this afternoon and
2 this evening. We will reconvene tomorrow
3 afternoon in Stonewall at the Legion at 1:00.
4 Thank you and good night.
5 (PROCEEDINGS ADJOURNED AT 8:21 P.M.)
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1 CERTIFICATE
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5 Lisa Reid and Debra Kot, Court reporters, in the
6 Province of Manitoba, do hereby certify the
7 foregoing 265 pages are a true and correct
8 transcript of my Stenotype notes as taken by me at
9 the time and place hereinbefore stated.
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14 LISA REID
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17 DEBRA KOT
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