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NATIONAL COMMISSION ON INDUSTRIAL FARM ANIMAL
PRODUCTION
HEARING HELD FEBRUARY 13, 2007, BEGINNING AT 1:00 P.M.
IN FAYETTEVILLE, ARKANSAS

APPEARING ON BEHALF OF THE COMMISSION

MR. JOHN CARLIN
MS. MARY WILSON
MR. JOHN HATCH
MR. DAN JACKSON
MR. ALAN GOLDBERG
MR. JAMES MERCHANT
MR. MICHAEL BLACKWELL
MR. BOB MARTIN
MR. BERNARD ROLLIN
MR. DAVID ANDREWS
MR. FRED KIRSCHENMANN
MR. TOM HAYES
SPEAKERS
MR. STEVE STRIFFLER
DR. AL HEBER
DR. PARK WALDROUP
DR. KURT ROBINSON
MR. EVAN TEAGUE
MR. GENE PHARR
DR. H. L. GOODWIN
MR. RUPERT FRASER
MR. KEN MIDKIFF
MR. DWAYNE MILLER
DR. LOYD KECK
DR. KEITH LUSBY
DR. PATRICK PILKINGTON
MR. MARK ADAMS
MR. JEFF GILLESPIE
MR. PETER BOYT
DR. WALTER BOTTJE
MS. MAY BELLE OSBORNE
MS. SUSANNA BRINNON
MR. MICHAEL ANDERSON
MS. LOUANN TODD
MS. KATHY TEBBITS

REPORTED BY: KERRI PIANALTO, CCR

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1 MR. CARLIN: I'm John Carlin and I'm
2 chairman of the commission. And we'll bring this
3 public hearing to order. I believe every one has
4 been advised of sort of the ground rules timing
5 wise. I have a timer here on the front row that
6 will signal to give you a little bit of an advance

7 warning, but we will be pretty strict in terms of
8 cutting things off because we have a lot of people
9 who want to make a presentation and we want
10 adequate time to ask questions and the only way
11 we can make that work is to proceed in a timely
12 organized way.

13 As you're all well aware, everyone had the
14 opportunity to submit in writing at whatever
15 length you wanted so we have a complete
16 documentation of your total presentation. The ten
17 minutes for those who were scheduled at first is to
18 be a summary, get to the point and allow us an
19 opportunity to focus in on some questions that will
20 be most helpful to us as we proceed in the study
21 we're undertaking about the industrialization of
22 farm animal production.

23 Before I call on our first presenter, I
24 would just simply remind all presenters come to
25 the podium, reintroduce yourself for the record

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1 and who you are with or identified with or work for
2 or represent or if you're just representing yourself
3 and then proceed with your testimony and then
4 we'll follow up with questions. We'll try to move
5 as fast and efficiently as possible between
6 presenters to not lose time.

7 I have advised the commissioners that
8 they are free from time to time and get up and
9 leave the room, so I just want to say in advance
10 anybody that leaves it's not a reflection of any
11 particular speaker coming. It's more of a
12 reflection when something else calls and duty must
13 follow. With that in mind then, I would call Dr.
14 Striffler to the podium from the University of
15 Arkansas. Dr. Striffler, you are our first
16 presenter.

17 MR. STRIFFLER: Okay. I'm Steve
18 Striffler, University of Arkansas. I represent the
19 University of Arkansas. I'm an anthropology
20 professor and I've written a book about chicken
21 and thought about chicken quite a bit. Yeah,
22 thanks for coming and holding the forum and
23 having me here and coming to Arkansas. I wish
24 the weather was a little better for you, but that's
25 what we got.

4

1 I actually decided to offer, I guess,
2 perhaps maybe two general comments to get things
3 kind of started probably because I think there's a
4 lot of people here that probably know more about

5 individual aspects of the poultry industry than I
6 do.

7 I guess in general I'm critical of the way
8 we do chicken in particular but meat in general
9 and food kind of even more broadly in the United
10 States and I think there's plenty to be critical of.
11 That's not to say that, you know -- well, I think
12 many folks, including myself, sort of live in denial
13 about our food system even though I think the
14 larger and larger portion of certainly Americans
15 are thinking critically about how -- you know,
16 what we put into our bodies and I think that's sort
17 of important. And particularly sort of with the
18 industrial system of producing, processing,
19 transporting, consuming and even really thinking
20 about food, and particularly with respect to meat,
21 I think this is particularly important.

22 Because of time I'm going to work kind of
23 from the assumption that industrial farm animal
24 production has a lot of problems and perhaps more
25 problems really in some sense than virtues. The

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1 simple fact is there is immense cost both hidden
2 and transparent in the industrial farm animal
3 production that we as a society pay even if it
4 doesn't always kind of show up as the cost in the
5 supermarket and I think that's important.

6 It's a very unhealthy system for the
7 workers who process the meat, for the farmers who
8 -- in the farm communities that raise the animals.
9 It's unhealthy for the environment. It's unhealthy
10 for consumers and I think ultimately it's
11 unhealthy for the animals, as well and that we
12 could certainly do a lot better. The factors
13 involved in production, processing, transportation
14 and consumption of food aren't benefiting to the
15 extent that they should be and most of the benefits
16 I think are accruing to relatively large
17 corporations and that's, I think, a troubling aspect
18 of our system.

19 In the case of food, I think one of the
20 things about sort of industries driven by the profit
21 motive as sort of all industries are within our
22 society is that in some cases you create lots of
23 affordable, useful and beneficial products.

24 In the case of food, I think this is
25 somewhat troubling in the sense that the idea that

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1 you need to continually create new products is
2 difficult with food because many of these products

3 aren't particularly healthy. And that's one, I
4 think, one of the central problems kind of with the
5 industry is that in the short term they generate
6 quite a bit of profits, but in the long term they're
7 not particularly healthy.

8 In terms of kind of what to do, I think we
9 should, you know, fight the good fight and work to
10 improve government legislation, regulation,
11 enforcement of industrial farm animal production
12 because I think, you know, it's been pretty
13 abysmal over the last hundred years overall, but
14 I'm also pessimistic when it comes to kind of
15 traditional attempts to reform the history through
16 traditional kinds of government regulation, in part
17 because, you know, we now have about a hundred
18 years or over a hundred years of regulation that
19 hasn't done particularly well in a general sense.

20 Also, I think there's very little on the
21 current kind of political landscape to make a
22 statement that major reforms are sort of on the
23 horizon within the industry. What I think that
24 means is in some sense we have to rethink the
25 industry -- or rethink the way we do meat in a

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1 couple basic ways.

2 Most importantly, I think we need in two
3 senses to think of it systemically, first, because
4 the problem with our industrial food is with the
5 system as a whole. By and large I think, and if
6 you're kind of around people that work in the meat
7 industry they're wonderful hard working people
8 and one of the things I sort of, you know, when I
9 was doing research I was certainly not amazed by
10 it but struck by it kind of over and over again is,
11 you know, it's not an industry for folks that don't
12 like to work hard and that goes from plant workers
13 to farmers to supervisors, you know, corporate
14 executives. These are folks that put in a lot of
15 hours.

16 The problem is that embedded, I think,
17 throughout the industrial food system is a profit
18 motive that has in kind of a narrow economic
19 sense created great efficiencies. I mean, it should
20 be applauded for that, but was compelled, I think,
21 you know, well-meaning individuals to participate
22 in a system that's not particularly good for them
23 or for consumers in sort of the long run or at least
24 could be a lot better.

25 Second, I think our thinking needs to be

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1 systemic because any attempts at reform should
2 think about our use of animals not solely in terms
3 of production but in terms of -- in the broader
4 sense of production, transportation, consumption,
5 all these kinds of different things. It's all tied
6 together and with animals I think there's also a
7 moral component to it, as well.

8 Personally I think we should try to find
9 radically kind of new and innovative ways of
10 opening up the industry to the market. This may
11 sound sort of almost reactionary, but I think, you
12 know, the meat industries are kind of hard core
13 market advocates when it comes to, you know,
14 government regulation on the environment, or
15 safety, these sorts of things. They would rather
16 have the industry kind of stay out of things.

17 On the other hand, I think there's an
18 expectation within the industry that expects
19 government intervention when it comes to
20 subsidies and these sorts of things and I think one
21 of the things we can do is kind of ensure that the
22 cost of meat in the supermarket actually comes
23 closer to reflecting what it truly costs in a social
24 sense.

25 And this may mean -- you know, I think

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1 the flip side to this is trying to create alternative
2 ways of doing food, ways that we sort of determine
3 are collectively more healthy and making those
4 more affordable and accessible to consumers.

5 Part of this process I think involves
6 finding ways to empower farmers, in particular, in
7 relation to the big corporations that now control
8 the meat industries, mostly because I think
9 farmers should be getting a bigger slice of the pie
10 because they shouldn't be afraid to organize and
11 speak out as many currently are, but also because
12 I think -- personally anyway, I trust farmers more
13 than I do sort of the larger corporations. And I
14 trust them sort of in a sense to improve and kind
15 of watch out for animal and consumer welfare on
16 the farm.

17 I think that's very difficult at present.
18 And empowering farmers is sort of -- by that I
19 mean, you know fighting for legislation and
20 funding to make it easier for them to organize, to
21 force corporations to level the playing field,
22 promoting kind of alternative ways of doing meat
23 and these sorts of things, and in part so farmers
24 have other options. I think at present most on a
25 local level have relatively few options and are

1 going with one or two corporations and don't have
2 sort of the option to deal with other kinds of
3 remedies.

4 Finally, I think one of the things we need
5 to find ways to do is to promote alternatives to
6 industrial agriculture in general. Some of these
7 will probably be taken over quickly by the
8 industry, but I think grass-roots efforts to
9 promote, you know, sustainable agriculture,
10 especially ones that are locally based, probably
11 have the best chance of challenging and reforming
12 the current industrial system. I'm not overly
13 optimistic with this, but I think that may be the
14 path.

15 They force us to rethink our relationship
16 to food and in this instance I think we need to find
17 ways to, you know, in a sense subsidize features of
18 a food system that make more sense from the
19 perspective of health in a wholistic kind of way
20 and also don't subsidize corporations to produce
21 unhealthy foods, which we currently do.

22 Finally last, I think we need to educate
23 ourselves as a public. I think one of the biggest
24 problems and also one of the virtues of the current
25 food system is that consumers are disconnected

1 from the final product. And this is true with --
2 you know, most of what we consume I think in the
3 case of food, it's dangerous. We have little sense
4 of where our food product comes from, who
5 produced it, you know, under what conditions,
6 these sorts of things.

7 Now, when consumers do have this
8 knowledge, I think, you know, we make better
9 choices and perhaps be willing to pay more for
10 food. And I think, you know, in this sense part of
11 that education may involve getting us away from
12 the kind of cheaper is better mantra that I think
13 defines much of America in certain respects,
14 especially our relation to food and re-educating
15 ourselves in terms of how to calculate the true
16 cost really of what we eat.

17 With respect to meat in particular, it
18 means getting folks, I think, to eat less, which is
19 something probably worth promoting across the
20 board with respect to food and something I think
21 that, you know, confronts the industry of an
22 industry that, you know, kind of consumes us as
23 we're continually consuming more food and I think

24 that's also sort of a fundamental issue. Anyway,
25 I'll stop there.

12

1 MR. CARLIN: Very Good. Questions?
2 What would be one thing you would suggest that
3 we specifically do?

4 MR. STRIFFLER: That you specifically
5 do. Well, what power do you have, I guess that
6 would be my question?

7 MR. CARLIN: Tremendous.

8 MR. STRIFFLER: I opt to say I'm very --
9 I mean, as a historian --

10 MR. CARLIN: Our responsibility is to
11 look at the issues, decide if there are problems
12 and alternatives and solutions and make
13 recommendations.

14 MR. STRIFFLER: Okay. I mean, my own
15 sense, I would try to come up with an innovative
16 way to empower farmers with respect to
17 corporations. I think if you talk to farmers and if
18 you talk to them candidly, you know, and off the
19 record, you'll find that there's a large portion of
20 them that, you know, live in fear may be too
21 extreme of a sort of statement, but it's close to
22 that and that would be my one recommendations.

23 MR. CARLIN: Michael?

24 MR. BLACKWELL: I think that's related
25 -- your answer is related to a question I had,

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1 maybe it's an answer to the question. You made
2 reference to transforming the industry by means
3 other than the traditional government approaches.
4 I may be not real accurate. Could you expand on
5 that?

6 MR. STRIFFLER: I mean, I think what I
7 mean by that is that if you look at it historically
8 and you look at attempts to enact reform within
9 the industry and even if you judge it by the
10 relatively thin sort of measures that the
11 government uses, it's been a failure. I mean, in
12 terms of regulating sort of safety within plants,
13 you know, a whole series of attempts to kind of
14 enact legislation and then enforce legislation and
15 the government just hasn't been successful doing
16 that in a hundred years.

17 And I think the difficulty at this
18 particular moment is with sort of, I'll just say,
19 with the current atmosphere, the political
20 atmosphere in this country. I think there is
21 relatively little hope that sort of a new way of

22 legislation will come through and make this
23 industry sort of more healthy, I guess. And in
24 that sense I think you need to -- and I don't have
25 all the answers, but I think you need to kind of

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1 think outside of that framework.

2 And it's not to say that government can't
3 do anything. It's just to say that I think those
4 traditional sorts of USDA kinds of regulations are
5 probably going to be limited in terms of what they
6 can do.

7 MR. BLACKWELL: I just want to follow
8 up and I'm just trying to get clarity here. So what
9 would be an example if we didn't use the
10 regulatory process, how do you get there?

11 MR. STRIFFLER: I think what -- I mean,
12 I think what you do, and I think government is
13 part of this, I think you find ways to promote
14 alternative forms of producing food that are
15 outside of that. And in that respect, I mean, you
16 sort of see that -- it's not to say that the industry
17 dropped those or won't get into those, but I think
18 in general it will shift things a little in the
19 direction of getting better than government
20 regulations that I think will be quickly called off.

21 MR. MERCHANT: You speak of
22 empowering consumers. Could you give us some
23 specific suggestions as to how that -- you would
24 see that as perhaps being a useful approach that
25 we could consider?

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1 MR. STRIFFLER: I mean, I think some
2 things you can do in terms of empowering
3 consumers is promoting alternatives, which may
4 mean, you know, taking away -- finding ways to
5 take away the subsidies that are going to sort of
6 big agriculture and pushing that money into
7 alternative forms of producing food and that way
8 makes, you know, I think more healthful foods
9 more affordable to consumers.

10 I think it also means educating consumers
11 in a sense of -- I mean, that could take many
12 forms. I guess it could be a campaign to educate
13 consumers. It could also be meaningful labels on
14 food products. I mean, I think right now sort of
15 what we have is just completely, you know, it's not
16 useless but close to it, particularly with respect to
17 meat. There's almost nothing there. You could
18 envision sorts of labels that give you a history of
19 the product, where it came from, conditions, these

20 sorts of things. I don't think that's sort of beyond
21 the realm either.
22 MR. CARLIN: Thank you very much.
23 MR. STRIFFLER: Okay. Thank you.
24 MR. CARLIN: Dr. Heber? Do we have a
25 Dr. Heber here?

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1 MR. HEBER: Yes.
2 MR. CARLIN: Purdue University. You're
3 on.

4 MR. HEBER: All right. Thank you. I am
5 from the agriculture and biological engineering
6 department at Purdue University and I'm the
7 director of the Purdue agricultural air quality
8 laboratory.

9 The Air Consent Agreement was
10 established between the livestock industries and
11 EPA and the basis of that air consent agreement,
12 and I'm assuming that you understand what that
13 is, but in question and answer I could clarify it,
14 but the basis of it is that EPA needs scientific
15 data and producers need compliance status.

16 Now, of all the pollutants that come from
17 the livestock producers, we have ammonia, sulfide,
18 volatile organic compounds, particulate matter,
19 odor, greenhouse gases and pathogens and we have
20 several questions that always come up with each of
21 these is how bad is it, how much is emitted and
22 how far does it disperse and if it is a problem then
23 what can be done about it, abatement.

24 Now, I circled the pollutants that are
25 being addressed by the Air Consent Agreement in

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1 the National Air Emission Monitoring Study. It
2 doesn't address odor and greenhouse gases and
3 pathogens unless an add-on study is provided and
4 USDA has actually provided funds to add odor to
5 some of these sites. And the other thing is that
6 the Air Consent Agreement is only addressing the
7 quantification of how much is emitted, so it's only
8 answering the question how much.

9 Now, over the last decade, similar types
10 of research have been conducted and it started
11 with an industry funded project in 1996. And 76
12 barn months of data were collected for ammonia,
13 hydrogen sulfide and odor and then the EPA
14 provided funds to establish and standardize the
15 methods for making ammonia and particulate
16 matter emission measurements.

17 And then the USDA provided a six day

18 study -- funds for a six day study that looks a lot
19 like the National Air Emission Monitoring Study.
20 There were two consent decrees, one in Missouri
21 and one in Ohio, that required similar
22 measurements, so they had already collected a lot
23 of emission data from farms.
24 Currently we have a study being done at
25 layer operations in Ohio and Indiana and also

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1 there's a court-ordered project in Kentucky out of
2 our other facility for measuring ammonia. Now,
3 that study was upgraded to meet the requirements
4 of the Air Consent Agreement so that the producer
5 there qualifies for that. We are now embarking on
6 the largest study ever conducted because it will
7 generate 840 barn months of data and 72 lagoon
8 months of data involving eight Universities, 40
9 barns, 14 barn sites and ten area sites all across
10 the country and it will be very comprehensive in
11 what it measures.

12 This is a picture of the method study.
13 This paves the way for this study, this national
14 study, because it addressed a lot of the technical
15 issues associated with measurement. And we
16 measured emissions. There are three variables
17 that we need as we measure emissions from barns,
18 for example. First of all, we measure the inlet
19 concentration of the fluid and in this case
20 ammonia is coming in 1.6 parts per million and
21 it's leaving the barn at 25 parts per million and
22 the air flow is 186 cubic meters per second, so
23 those three variables are used to calculate the
24 emission at this particular point in time.
25 Now, one point is that you can't measure

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1 emissions by just taking a concentration
2 measurement because you have to take it times the
3 airflow, so even if you smell ammonia in a barn it
4 doesn't mean that emissions are high because it
5 depends on how many fans are on.

6 The -- so the two thorough projects that
7 we conducted, one, of course, was EPA -- with EPA
8 oversight, we conducted the consent decree project
9 and then that is at the top of the page. The
10 picture of the Missouri site where we tested
11 abatement ideas, as well as getting baseline
12 emission data and then the middle figure shows
13 the layer site in Indiana as part of the six state
14 site. Now, the six state study had four pork sites
15 and two chicken farms in the study and then the

16 consent decree study was being done at the same
17 time.

18 The National Air Emission Monitoring
19 Study is what I want to talk about next in more
20 detail. And the objective is to find out whether
21 livestock farms are likely to emit the particulate
22 matter in the bioorganic compounds in excess of
23 the Clean Air Act or whether they're emitting
24 ammonia and hydrogen sulfide in excess of the
25 recording requirements of EFRA and CERFA. And

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1 we will monitor the farms for 24 months and at the
2 area sources we will monitor every season for the
3 24 months for about 20 days each time and we are
4 measuring ammonia, hydrogen sulfide, bioorganic
5 compounds and particulate matter on a continuous
6 basis.

7 The sites were selected last year, 2006,
8 and we considered these criteria for making the
9 selection of sites. We considered
10 representativeness, convenience. We needed to
11 have someone who couldn't be too far away from
12 researchers and they actually had to sign up for
13 the Air Consent Agreement as well, so that was
14 another criteria.

15 And so the sites include five dairy sites,
16 one in California, Washington, Wisconsin, Indiana,
17 and New York; five pork farm sites and those are
18 located in Oklahoma, Iowa, Indiana, North
19 Carolina; and three layer sites, California, Indiana
20 and North Carolina; and then one broiler site in
21 California. Now there's another broiler site as
22 shown in Kentucky that's not part of the National
23 Air Emissions Monitoring Study, but as I said
24 earlier, that was upgraded to be included as an Air
25 Consent Agreement monitoring site.

21

1 If you look at the egg production in this
2 country, you'll see, you know, this is just a -- it
3 gives you an idea of where the sites are with
4 respect to the geographical location of the egg
5 production. And then the next one, it does the
6 same thing for broiler chickens and so we have one
7 site in each geographical area.

8 Now, the National Air Emissions
9 Monitoring Study is funded by industry and so the
10 milk, pork, egg and chicken industries have all
11 stepped up to the plate and provided funds and
12 given those to the not-for-profit organization
13 called the Agricultural Research Council which

14 was formed for this Air Consent Agreement. They
15 contracted with Purdue University. I'm the
16 science adviser. I have my leadership team and
17 also the principal investigators at the
18 subcontracting universities along with several
19 producers that are collaborating with us in
20 opening up their farms.

21 And in all the studies that we've done
22 since 1996, you know, the producers have been
23 very collaborative with us. And the barn
24 monitoring will be done like this: mobile
25 laboratories will be set up near the barns, the

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1 gases will be extracted into high-quality
2 instrumentation inside the trailers, particulate
3 matter will be measured in real-time out there
4 near the fans. You know, just as important as
5 concentrations, we need to get good airflow
6 measurements. And the instrument shelter
7 protects the instruments. We will -- this is a
8 picture of one of the gas sampling points inside
9 the barn and we will provide calibration gas right
10 to that point. This gas sampling system was
11 developed over a period of ten years and is really
12 state-of-the-art.

13 The microwave technology provides
14 real-time measurement and with different inlets we
15 can measure PM2.5, PM10 and total suspended
16 particulate. And besides emission, we're going to
17 monitor other things that affect emissions on the
18 farm.

19 Here's a picture of the Southeast layer
20 site, the monitoring plans, the two barns out of
21 the entire facility we monitored. And the broiler
22 site, there will be two barns out of the complex
23 there that we monitor.

24 Now, the progress is that the quality
25 assurance project was written last year. It

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1 includes about, almost 2,000 pages, all the
2 standard operating procedures, site monitoring
3 plans. This was approved by the EPA in November
4 and our contract was signed on December 6th and
5 we're in the middle of equipment acquisition. We
6 should finish by the end of this week, if not early
7 next week, in ordering all the equipment. The
8 updates for this study will be available at our web
9 site, agairquality.com and I think my time is up.

10 MR. CARLIN: You did very, very well.

11 MR. HEBER: Thank you.

12 MR. CARLIN: Do you have a 50 minute
13 lecture you give automatically to students that
14 just fit that 50 minutes perfectly?

15 MR. HEBER: I do.

16 MR. CARLIN: I bet so.

17 MR. HEBER: For 50 minutes, I know
18 there are 50 minutes on air emissions.

19 MR. CARLIN: Question, Jim.

20 MR. MERCHANT: Yes. Thanks for that
21 presentation and obviously a tremendous amount
22 of work is going into this, but EPA is set up to
23 really protect the public's health and what this
24 study is doing is really concentrating on
25 conditions at the site or emissions from the site.

24

1 The concern is what's going on in residences close
2 by, schools close by. There are a series of studies
3 that are coming out in this country and in Europe
4 that show increased rates of childhood asthma in
5 proximity to CAFO's, so I guess my question is
6 what is EPA doing and what is this study doing to
7 measure these pollutants at residences in
8 communities that are downwind from these sites?
9 Because that is really the issue the EPA ought to
10 be addressing and it's an important one because
11 we're getting the health outcome data reported but
12 we're not getting the environmental conditions.

13 The elegant data that you're collecting
14 here is not available at the residences at the
15 community level, so you can draw some conclusion
16 about what's -- you know, how the pollutants
17 ought to be better regulated. So I guess that's my
18 concern about this study, are you really measuring
19 what needs to be measured to protect the public's
20 health?

21 MR. HEBER: Well, I think we are. I
22 think the -- there are national ambient air
23 standards and one of the ways the EPA tends to
24 achieve those national air quality standards is
25 through regulation of emissions from various

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1 facilities. For example, they require that no
2 facility emits more than 250 tons per year,
3 otherwise you have to get a permit and have
4 controls and the purpose of that is to lower the
5 ambient air quality.

6 And in order to regulate livestock, they
7 need to know how much is being emitted, emission
8 factors. That's a very important aspect of the
9 overall regulatory program, to know what the

10 emission rates are and right now they have very
11 limited data on knowing, you know, how many
12 cattle emit 250 tons of a particulate matter per
13 year so that they can regulate it. And there are
14 dispersion models that require source emission
15 data in order to predict how far -- what the
16 concentrations are down here and are at the
17 residences. One of the inputs to those models is
18 the emission rate, so we are getting that emission
19 rate.

20 And I guess another -- there's a lot of
21 things I could say about that but very limited
22 time, but here's another opportunity with this
23 study and that is since we have 14 sites and we're
24 monitoring emission rates from those sites, at the
25 same time we could be measuring downwind

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1 because whenever you do a downwind study of a
2 facility you want to have the emission rate, the
3 weather and you want to have the ambient
4 concentration. Now, it's true we're not getting the
5 ambient concentration, but with -- we could
6 leverage and add on a study like that.

7 And, in fact, at one of the sites we are
8 measuring downwind for odor. That just got
9 funded with an internal grant from Purdue
10 University. We're going to measure odor
11 concentration downwind miles and miles away
12 while the odor emission is being measured at the
13 facility.

14 MR. MERCHANT: I hope that those of you
15 involved in the study take the opportunity to do
16 that because what you say is true about dispersion
17 models. The validating of dispersion models with
18 real data is really what's needed. You have a huge
19 investment in terms of technology, access to the
20 industry, and so on. If you would add that second
21 step, which is to measure downwind in proximity
22 to these units to more accurately use the
23 disbursement models, then that would really
24 advance EPA's understanding of what's going on
25 with this industry, so that is critical and I really

27

1 strongly encourage you to do it. It's the missing
2 piece of what we lack in terms of understanding
3 emissions from CAFO's and their impact on
4 communities.

5 MR. HEBER: I would have to say there
6 are studies that have measured downwind
7 concentrations of ammonia and hydrogen sulfide

8 and the EPA enforcement office has been involved
9 in some of those studies.

10 MR. CARLIN: Alan?

11 MR. GOLDBERG: Yeah. Thank you very
12 much for the presentation. Can you give me some
13 indication if you just pick something, one of the
14 pollutants, of levels that will produce health
15 consequences in the animals?

16 MR. HEBER: Okay. I think the poultry
17 industry is concerned about ammonia and they see
18 some symptoms in their birds when ammonia levels
19 are too high. I'm not going to tell you what those
20 levels are, but that's something they work with on
21 a day to day basis to control the ammonia levels in
22 the litter and also -- well, you know, they have the
23 air quality standard now for animal welfare of 25
24 parts per million in layers so I know producers
25 that have hired people just to address the

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1 ammonia issue full-time. And so I think for
2 poultry, I think ammonia is the biggest air quality
3 issue for -- and they address that for bird health.
4 I think for swine and dairy it's less, so, but for
5 chickens it's pretty high priority to control
6 ammonia inside the barn, control that
7 concentration inside the barn.

8 MR. CARLIN: Fred?

9 MR. KIRSCHENMANN: Yeah. From a
10 human health perspective, have you or your
11 colleagues been able to determine which of any of
12 these particulates or compounds are the most
13 troubling in terms of human health?

14 MR. HEBER: We have not conducted the
15 health research. That is not my expertise and we
16 don't have a medical school at Purdue University
17 that I can team up with. We have -- I am in
18 collaboration, you know, at least talking with
19 Indiana University professors to do that type of
20 thing.

21 MR. CARLIN: Anything else? Thank you
22 very much.

23 MR. HEBER: Thank you.

24 MR. CARLIN: Dr. Waldroup, University of
25 Arkansas.

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1 MR. WALDROUP: Right. My name is Park
2 Waldroup. I'm a professor at the University of
3 Arkansas. I've been involved in poultry research
4 now for about 47 years and I think this
5 background is on my side because poultry and

6 poultry nutrition has become an international
7 situation. The feeding that we do here in the
8 United States is reflected in Brazil, it's reflected
9 in China, it's reflected in Thailand and virtually
10 everywhere around the world.

11 We like to think that we know more about
12 the nutrient requirements in chickens than almost
13 any other animal including man and there's a
14 number of reasons for this. A small animal is easy
15 to handle. It grows fast. We can get a lot of
16 turnaround. Now, you can say the same thing
17 about the white rat, but the big difference here, of
18 course, is that there's a great commercial
19 application.

20 The poultry industry, although it's very
21 large is a very small community, actually, of
22 researchers and nutritionists and we know each
23 other and we do a lot of collaboration and there's a
24 very quick application of the research that we do,
25 which is commercial practice. And this has been

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1 brought about, of course, not only through genetic
2 research but also the nutrition to allow us to
3 produce chickens at a very economical rate and to
4 provide a very high quality protein at a very low
5 cost to the consumer.

6 Feeding poultry or formulating poultry is
7 really a very simple step just like almost any
8 manufacturing process. There are several steps
9 that we go through. First of all, of course, is
10 trying to establish what nutrient requirements
11 that we want to meet; that is, what sort of
12 nutrients do we want to provide to the bird.

13 Next, we have to see what materials are
14 available. The poultry industry, just as Mr. Carlin
15 in the dairy industry, works off of byproducts.
16 There aren't too many things that are grown --
17 people don't kill cows just to make meat and bone
18 meal for chickens. So we have to see what do we
19 have available. In looking at those ingredients we
20 have to make some decisions, is there limitation
21 on the quantity available? Up until now, for
22 example, we've been able to buy just about all the
23 corn that we wanted. We're running into
24 situations now where that may not be the case.

25 And certain other ingredients, there are

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1 certain limitations on how much we can purchase.
2 There are certain physical limitations. For
3 example, in some areas molasses might be a good

4 buy, but there's some physical limitations to how
5 much you can add. There are some ingredients
6 that actually have some toxic factors if fed at very
7 high levels. Cottonseed meal is a prime example.

8 And taking all these into account then we
9 can blend these together to come up with a
10 mixture that gives us the requirements at the most
11 economical price. This may change from day to
12 day. It may change from hour to hour. It
13 certainly changes from week to week.

14 Very few companies have a very fixed
15 formula. It changes literally almost from day to
16 day. These are the 40 known nutrients that are
17 required by the chicken, the pig, the man or any
18 other animal and we'd like to think that we have a
19 pretty good handle on all of these 40 nutrients as
20 to what a young chick needs. And it looks pretty
21 formidable, but when we start breaking it down we
22 look first and see that we typically add a vitamin
23 premix that supplies all of the known vitamins in
24 more than adequate quantities so that we don't see
25 all the nutrient deficiencies that were once very

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1 common in the animal industry.

2 We also add a trace mineral mix so that
3 we can provide the quantities of these because
4 depending upon different parts of the country and
5 where the grain is grown and so forth they may not
6 have enough iron or zinc or selenium, so we
7 provide these in a trace mineral mixture.

8 All the nutrients that I showed here in
9 yellow are almost always going to be in additive
10 quantities no matter what type of ingredient that
11 you use. So really we wind up actually looking at
12 about ten key nutrients when we start to formulate
13 a diet. We have to provide energy, of course, and
14 this is the primary cost of producing a poultry
15 diet. About 70 percent of the cost of producing a
16 poultry feed goes to make up the energy and this
17 is where I'll address this a little bit later.

18 Please go back, please. There are about
19 six critical amino acids that are needed and about
20 three minerals that we have to consider when we
21 start to formulate a feed. Who sets the standards
22 for what goes into a poultry feed? If you go to
23 almost every country outside the U.S., there's
24 usually some governmental agency that says a
25 starter chicken feed has to have X amount of

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1 protein. The dairy feed has to have Y amount of

2 calcium and so forth. Typically when you talk to
3 government officials, they say, well, we want to
4 protect the farmer, we want to make sure that the
5 chicken or the pig has enough protein. Typically
6 in doing this the nutrients are usually far in
7 excess of what are needed and simply in an effort
8 to "protect the farmer."

9 Virtually all the poultry produced in the
10 U.S. is under the integrated system in which the
11 feed company itself sets its own standards in
12 terms of nutrient standards. The company may
13 decide to produce a chicken at a very high rate of
14 gain. It may decide to because of -- usually these
15 decisions are based on the types of ingredients
16 that are available locally.

17 In one area you might have plentiful
18 supplies of grain, in others they might be less
19 plentiful and so decisions are made. For example,
20 this is a survey of 160 different poultry complexes
21 and just looking at the energy, the crude protein
22 and a couple of the critical amino acids. You can
23 see there was as much as a ten percent difference
24 from the lowest to the highest in terms of what
25 energy level that they chose to use probably

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1 because -- and all of these were probably because
2 of the types of ingredients that were available to
3 them. As much as 20 percent difference in the
4 protein content.

5 Basically when we start putting a diet
6 together, we have to look at several critical
7 ingredients. And I have listed these in basically
8 the order of their importance. First, we have to
9 have a good high quality protein source. We are
10 growing animals and this is a protein driven
11 factor.

12 We have to have grains or grain
13 byproducts for energy. We use supplemental fats
14 and oils. We need a source of phosphorus.
15 Phosphorus is the key ingredient for growing
16 bones. We have to have other essential minerals,
17 principally calcium and sodium and, of course, the
18 essential vitamins.

19 We also -- if we start looking at where
20 we're getting the grains from, corn, I'm showing
21 here the relative energy bag of some of the common
22 grains and corn, of course, is by far the highest in
23 energy followed closely by sorghum. You've all
24 read a lot recently about the ethanol industry and
25 the potential byproduct from distillery grains.

1 Notice that it's way down the list in terms of its
2 potential energy value.

3 If we start looking at volume, of course,
4 there's no question here. This is why we're using
5 a lot of corn. If we look at the next one, we see
6 the fact that's really disturbing me is that a
7 tremendously increasing amount of corn is being
8 used for ethanol production and this is leading to
9 some critical situations.

10 Among the protein sources, soybean meal
11 is the primary one that's used and if you look at
12 the next slide that's showing the volume produced.
13 You can see this is why we're driven largely by
14 using corn and soybean meal for our primary
15 ingredients.

16 We also, of course, have been a big user
17 of inedible fats from the restaurants and fast food
18 industry and we make a lot of use of supplemental
19 pure amino acid that helps to stretch out and
20 balance our protein.

21 There's no such thing as an average, but
22 this would be a typical diet that would be found in
23 virtually every poultry grower diet. As you can
24 see, it's a very simple mixture consisting of a lot
25 of byproducts feed, but well supplemented with

1 vitamins, minerals and amino acids.

2 The poultry industry, of course, has
3 become very conscious about the environment.
4 That is characterized by having a lot of chickens
5 in very concentrated areas and most of these
6 areas, of course, are located in areas where poor
7 economic -- poor agronomic productions. I grew
8 up in the poor rural south and many of you are
9 aware of the fact that there wasn't a whole lot to
10 do until people started to build chicken houses
11 but this, of course, causes problems.

12 This is a map showing the excess
13 phosphorus not only from chickens but other
14 animals and the poultry industry, of course, is
15 addressing this. We have started using phytase
16 enzymes to help improve the phosphorous in there.
17 I ran a survey recently and they're estimating that
18 80-85 percent of the grower-producers are now
19 using phytase enzymes. Nitrogen is going to
20 become a problem and we're working on that.

21 Let me just make one more comment here.
22 Biofuels, this is an area that's really worrying me
23 and a lot of people. As we saw, an increasing
24 amount of corn is going into making ethanol. It

25 leaves us a byproduct, but the byproduct is very

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1 poor in quality. It's much lower in energy, much
2 lower in protein quality. And, in fact, this was in
3 the paper just recently and we started seeing the
4 war between food and fuel starting. People in
5 Mexico cannot afford to buy corn tortillas now,
6 and I'll leave it at that.

7 MR. CARLIN: Thank you very much.
8 We're obviously looking at issues in a broader
9 sense than what you have shared and you've been
10 working in the poultry industry for a long time. In
11 addition to what you've shared with your
12 presentation, what do you see as the other issues
13 for the poultry industry as we look to the future?

14 MR. WALDROUP: Well, you know,
15 certainly right now to me the environmental issue
16 is going to be a -- is and will continue to be a
17 critical issue. I think we're addressing that.
18 Some of the other speakers are going to be
19 addressing problems with that. My, at least
20 short-term, concern is just simply this battle
21 between fuel and food because it is really getting
22 to be a critical point if we are going to continue to
23 produce meat for our consumers versus putting
24 alcohol in our cars.

25 MR. CARLIN: Yes, Dan?

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1 MR. JACKSON: You have a frame in your
2 talking about -- that you didn't mention about
3 feeding arsenic and antibiotics. Could you say a
4 little bit about that?

5 MR. WALDROUP: Well, the usage of these
6 has dropped precipitously in recent years. Two
7 years ago I would have said 90 percent of the feed
8 contained arsenic in some -- an arsenical, let me
9 say an arsenical. I think the figure today -- now,
10 let me emphasize that chart that I showed does not
11 include all of the poultry producers. Not all
12 poultry producers participated in that survey, but
13 today it's about, what, 30 percent. It is a very
14 useful product. It is useful for animal health.
15 You know, in Europe they have now tried to go
16 antibiotic free and they wind up with a tremendous
17 amount of health problems in their chickens
18 because of that.

19 MS. WILSON: Could you comment on the
20 environmental fate of the arsenicals?

21 MR. WALDROUP: I'm not an expert in
22 that area. I just choose not to comment on that.

23 MR. CARLIN: Thank you very much, sir.
24 Mr. Robinson from the Save the Illinois River.
25 Kurt Robinson, correct?

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1 MR. ROBINSON: Right.

2 MR. CARLIN: And where are you from?

3 MR. ROBINSON: I'm from Muskogee,
4 Oklahoma. Thank you very much for inviting us to
5 speak and caring about what we have to say. I'm
6 Kurt Robinson. I'm the president of Save the
7 Illinois River and that is also known as STIR, the
8 acronym S-T-I-R. Ed Brocksmith's letter preceded
9 me. You may have that in front of you. I'm not
10 going to read the letter to you, but I want to make
11 a couple corrections for the record.

12 In his statement he says about the
13 Arkansas management plans that they aren't in
14 effect, but they are in effect and that's just
15 happened recently. He also mentions a statistic in
16 the body of his letter where he talks about 60
17 percent of the nutrient impairment in the river.
18 What he means by that is 60 percent of the
19 non-point.

20 STIR is the only nonprofit organization
21 chartered specifically for protection and
22 preservation of the Illinois River, Flint Creek and
23 Barren Fork Creek and Lake Tenkiller. It is made
24 up primarily of stakeholders, concerned citizens
25 that are concerned about water quality, fishermen

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1 and recreationists in northeastern Oklahoma.

2 STIR was formed in the 1980s as a group
3 that opposed the Fayetteville, Arkansas's permit to
4 -- the EPA permit to discharge into the Illinois
5 River basin and that case went all the way to the
6 Supreme Court. Fayetteville won the decision, but
7 there was an important ruling that came out of
8 that and that is that upstream states must meet
9 water quality standards of downstream states. So
10 that's who we are.

11 The Illinois River starts south and west of
12 here and travels northward into a large poultry
13 farming area. Literally hundreds of poultry
14 feeding operations are there and then it turns west
15 and enters Oklahoma just south of Siloam Springs
16 and to a lesser degree there's still a significant
17 poultry presence there in northeastern Oklahoma.
18 It flows approximately 30 miles to the south and
19 forms Lake Tenkiller.

20 The economic impact of the Illinois River

21 and Lake Tenkiller is approximately two million
22 visitors and \$30 million per year and the esthetic
23 value of these assets and the quality of life, you
24 can't put a number on that. It also is the source
25 for 22 communities' drinking water.

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1 Now, a short chain of events that leads us
2 to this hearing today, that leads STIR to this
3 hearing, is in 1970 Oklahoma declared the Illinois
4 River and its tributaries, Flint Creek and Barren
5 Fork Creek, state scenic rivers and it afforded
6 them the protective laws by that act. In 1998, the
7 federal Clean Water Action Plan directed the states
8 to reach a numeric criteria for nutrients and
9 Oklahoma followed up with and adopted a .037
10 milligrams per liter total phosphorus content in its
11 scenic rivers and that is to be established by
12 2012. The U.S. EPA approved that limit in 2003.

13 The next event that happened was the
14 state of Oklahoma negotiated with the poultry
15 industry for approximately three years. Those
16 negotiations failed and Oklahoma filed suit against
17 the poultry companies for polluting the Illinois
18 River watershed with excess poultry waste. So the
19 problem, the problem is that we've got runoff
20 bringing phosphorous to the Illinois River and also
21 bacteria. We've got millions of birds in the basin
22 and we've got hundreds of thousands of tons of
23 poultry litter that we're putting on the ground. So
24 what has happened over the many years is that we
25 have developed a nutrient surplus in the soil. The

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1 state of Arkansas declared that by state law this
2 was a nutrient surplus area and scientific studies
3 have been done that have found that there is an
4 elevated phosphorus content in the soils in the
5 Illinois River basin.

6 So after, you know, after years and years
7 of applying the litter as fertilizer, and now we
8 know that we have the surplus, at some point it
9 stops being fertilization and it starts becoming
10 what one might think of as disposal. Now, the
11 USGS has been testing the water in the Illinois
12 River for quite a while, many years, and the
13 recent, the most recent numbers from the USGS
14 indicates that the phosphorus level at the state
15 line is roughly ten times the state limit for
16 phosphorus that was the .037. And Tenkiller
17 Lake, the loading to Tenkiller Lake is
18 approximately from the period of 2000 to 2004 a

19 half a million pounds per year, so we're killing
20 Lake Tenkiller.

21 Not only phosphorus, but bacteria has
22 also been found to be a problem in the river. Dr.
23 Riley Needham, a Ph.D. scientist with Phillips
24 Petroleum, did some studies in this area in 2005
25 and his conclusions were that the source of the

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1 phosphorus and the bacteria, the major source,
2 was non-point, upstream from Watts, Oklahoma,
3 which is just over the state line, and that the
4 bacteria and the phosphorus were coming from the
5 same source. Some of the bacteria -- the bacteria
6 that he measured were fecal coliform, E. coli, and
7 fecal Streptococcus and they were found to be
8 above the standard most of the time.

9 So what do we do about all this? That's
10 why we're here. For one thing, the corporations
11 can take responsibility and, for instance, and that
12 doesn't mean just the poultry industries in
13 Arkansas but hog industries, cattle industry,
14 wherever the CAFO's are presenting the pollution
15 problem. They can take a page out of the book of
16 the Oklahoma oil industry and that is in 1994 they
17 established the OERB. That is the Oklahoma
18 Energy and Resources Board. That was to create
19 an administration that would self-tax the industry
20 and they would take that money and they would
21 solve pollution problems, restore oil sites, so on
22 and so forth. Since 1994 the OERB has raised \$60
23 million and restored 7,000 oil sites.

24 Another thing you can do is tax credits at
25 the state level, possibly at the federal level. And I

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1 want to take this opportunity to congratulate a bill
2 that's going on right now in Arkansas and that is
3 House Bill 1318 by representatives Sullivan,
4 Petrus and Thyer. This is good legislation. It
5 creates tax credits for buyers and sellers of the
6 litter in the basin. So if you take the litter out of
7 the basin, you get a tax credit and the buyer of
8 that also does, so those are -- I have a couple
9 other remedies that I could -- I have on my -- I see
10 I'm out of time, if somebody wants to ask me about
11 them.

12 MR. CARLIN: Well, my first question
13 then will be what are two other possible remedies
14 that you might share with us today?

15 MR. ROBINSON: Thank you, Mr. Carlin.
16 Besides tax credits, I think that treatment

17 facilities onsite is something we need to be looking
18 at in the future and we need federal programs that
19 will grant money to research for that. It may --
20 this may be going on now, I don't know. An onsite
21 facility that would treat the waste -- as these
22 CAFO's get bigger and bigger and as time goes on
23 and the land conditions get smaller and smaller,
24 we're going to have a big problem and onsite
25 treating of the waste is, I think, the future of this

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1 deal.

2 Federal setbacks right now could be done;
3 that is, right now we have sensitive watersheds all
4 over the country and we need federal setbacks for
5 establishing new CAFO's.

6 And lastly, since you asked, nutrient
7 credits which is kind of a controversial but it's a
8 program that's going on in the Chesapeake Bay
9 area and that is, for instance, let me just give you
10 an example. In theory if Fayetteville, Arkansas
11 needed to be at 1 milligram per liter at the end of
12 their pipe, phosphorus, and let's say that they're
13 making -- that they're getting 1.25. Well, in a
14 basin like what we've got where we've got the
15 major problem is non-point and then you've got
16 point sources that are under the gun, in a
17 situation like that, these tax credits -- these
18 nutrient credits would allow them to make a deal
19 with a farmer and haul X amount of tons of poultry
20 litter out of the basin, you know, in turn -- in a
21 trade-off of either being fined or spending millions
22 to bring that down from 1 milligram to 1.25 or vice
23 versa.

24 MR. CARLIN: Would you go through that
25 just a little more and make sure we understand?

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1 Maybe some of the members here do, but --

2 MR. ROBINSON: The nutrient credits?

3 MR. CARLIN: Yes. You were saying the
4 city of Fayetteville as your example --

5 MR. ROBINSON: As an example, yeah.

6 MR. CARLIN: -- could pay one of the
7 chicken farmers, subsidize them so they could ship
8 --

9 MR. ROBINSON: Right.

10 MR. CARLIN: --some of their manure.

11 MR. ROBINSON: Yeah, well, sure. Let's
12 say that Fayetteville was under the gun to meet a
13 requirement by law and there would be some
14 application in that law that would allow them to

15 put that off for a period of time and that would
16 keep them from spending millions and millions of
17 dollars to get from 1.25 to 1 milligram and at the
18 same time they, you know, whatever that trade-off
19 would be would all have to be worked out, but they
20 could buy tons of chicken litter that's in the
21 basin, in a sensitive basin, and haul it out.
22 MR. CARLIN: Alan?
23 MR. ROBINSON: That's an idea.
24 MR. CARLIN: Good, thank you.
25 MR. GOLDBERG: In following up on the

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1 previous question, do you know of any historical
2 data on the amounts of arsenic in the river?
3 MR. ROBINSON: No. No, I do not. I
4 have -- I do not believe that that has been
5 measured. Now, there -- they might -- that I know
6 of, it's not been measured.
7 MR. CARLIN: Just one last thought. To
8 sum up, I'm assuming I'm hearing correctly that
9 you're not saying the fact that we have large
10 numbers of poultry in the area is a problem, it's
11 the manure that's the problem?
12 MR. ROBINSON: Absolutely.
13 MR. CARLIN: And the concentration of
14 that?
15 MR. ROBINSON: It's what you're doing
16 with the manure.
17 MR. CARLIN: Yeah, and so if you dealt
18 with that, that would address your concern?
19 MR. ROBINSON: Absolutely, yes.
20 MR. CARLIN: John?
21 MR. HATCH: I'm interested in who is the
22 STIR membership, are you scientists, are you
23 citizens, just who?
24 MR. ROBINSON: STIR has many -- we're
25 a grass-roots organization made up of primarily

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1 local northeastern Oklahoma people, although we
2 have members all over Oklahoma, some in
3 Arkansas. We're just everyday citizens, walks of
4 all life, doctors, lawyers, fishermen. You name it,
5 if you're concerned about clean water in
6 northeastern Oklahoma, you're probably a STIR
7 member.
8 MR. CARLIN: Very good, thank you.
9 MR. ROBINSON: Thanks a lot.
10 MR. CARLIN: While Mr. Teague is coming
11 up, I would remind commission members that
12 unless you tip your little name deal up, I can't tell

13 if you're interested or not in asking questions.

14 Evan?

15 MR. TEAGUE: Yes, sir.

16 MR. CARLIN: You're on.

17 MR. TEAGUE: Thank you. My name is
18 Evan Teague. I'm the environmental specialist for
19 the Arkansas Farm Bureau Federation. On behalf
20 of the Arkansas Farm Bureau Federation, I would
21 like to express our appreciation to the commission
22 for the opportunity to address you here today
23 about Arkansas's economy, animal agriculture and
24 environmental stewardship. Just to give you an
25 idea about the Farm Bureau, we represent over

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1 230,000 member families in the state and in the
2 counties you toured yesterday, Benton and
3 Washington. We have over almost 16,000 member
4 families in those two counties alone.

5 Arkansas's agricultural complex is the
6 largest industry in the state. It represents almost
7 25 percent of the state's total economy.

8 Contribution of Arkansas's agriculture to the
9 state's economy is higher than that of any other
10 state in the nation.

11 It's nearly one in four Arkansans are
12 employed in the ag sector representing either the
13 farm input center on the farm or either in the
14 production, marketing, or distribution of food or
15 farm products. Overall, Arkansas is still the 11th
16 largest state in the country in the value of annual
17 farm production with annual cash receipts
18 approaching about \$7 billion. Arkansas's farm
19 sector is predominantly animal oriented and it's
20 two thirds of the state's annual farm production
21 value is generated by the poultry, livestock,
22 aquaculture and dairy industries. Over half of
23 that -- or fully half of that is generated by the
24 poultry industry alone. Benton and Washington
25 counties are the state's highest ranking animal

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1 agriculture and counties. Also in the nation,
2 these two counties are ranked 25th of 34
3 nationally in value of agricultural farm
4 production. So as you can see, agriculture in
5 general and also animal agriculture are crucial to
6 this region and also to the state.

7 Arkansas has positioned itself ahead of
8 the EPA and many the other states through its
9 regulatory programs. Arkansas regulatory
10 agencies are more proactive than many other

11 states throughout the nation. We have two
12 agencies that regulate animal agriculture, that
13 being the Arkansas Department of Environmental
14 Quality and the Arkansas Natural Resources
15 Commission.

16 Arkansas was one of the first states to
17 adopt regulations managing liquid animal waste.
18 Back in May of 1990, then Governor Bill Clinton
19 commissioned the governor's task force on animal
20 waste. The task force findings resulted in the
21 adoption of ADEQ, the Department of
22 Environmental Quality Regulation 5. This
23 regulation requires that all producers of liquid
24 animal waste obtain permits and then all of these
25 individuals holding permits receive annual

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1 training on the management and care of animal
2 waste. Regulation 5, this regulation allows animal
3 waste to be used in a beneficial manner while at
4 the same time protecting the environment.

5 In 2003 the Arkansas state legislature
6 passed the laws creating Arkansas's nutrient
7 management plan rule. They codified this law Title
8 22. Title 22 designated counties in Northwest
9 Arkansas including Benton and Washington as
10 nutrient surplus areas as you heard from a
11 previous speaker. What these laws require is that
12 anyone applying nutrients or any land owner
13 applying nutrients in a nutrient surplus area must
14 obtain a nutrient management plan before applying
15 nutrients including raw poultry litter and
16 commercial fertilizer. It's not just slanted to
17 litter but also pertains to fertilizer in this
18 regulation. These nutrient management plans are
19 some of the most stringent in the United States
20 due to the fact that their nutrient application
21 limits are phosphorous-based. You first check for
22 phosphorus, then you go to other nutrients.

23 The University of Arkansas Division of
24 Agricultural along with the Biological and
25 Agricultural Engineering Department have

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1 exceptional research staff who are nationally and
2 internationally recognized as some the preeminent
3 experts regarding water quality and watershed,
4 water quality modeling, stream ecology and
5 nutrient transport, particularly as it relates to
6 phosphorus.

7 The division recently established the
8 Watershed Research and Education Center. The

9 creation of this center serves as an example of the
10 divisions in agriculture to continue innovation
11 addressing water quality issues and watershed
12 issues also.

13 More along the lines of Farm Bureau's
14 activities, in 2003 the Arkansas Farm Bureau
15 Federation delegate body recognized the need for
16 and approved the policy that created the very
17 position that I hold today, environmental
18 specialist. At the same time it created the
19 Environmental Issues Committee.

20 In 2004 the federation began including an
21 environmental issues conference as part of its
22 series of special farming conferences in the state
23 and the convention. Between the committee and
24 the conferences, our members have been educated
25 on a variety of subjects including environmental

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1 regulations, developing partnerships, agronomic
2 and environmental management of phosphorus.

3 Our members in Northwest Arkansas
4 participated in the formation of a new watershed
5 group called the Illinois River Watershed
6 Partnership. The partnership has brought together
7 Arkansans and Oklahomans to discuss and address
8 water quality issues. Even though still in its
9 infancy, its showing promise to addressing water
10 quality issues in Northwest Arkansas and
11 Northeast Oklahoma. One example is the
12 possibility that a proposal submitted by the
13 partnership will be accepted and be selected as
14 one of the EPA's target watershed grants.

15 During the 2006 Arkansas Farm Bureau
16 annual meeting, our membership approved new
17 policies that support the transportation of excess
18 litter out of nutrient surplus areas.

19 Arkansas House Bill 1318 entitled the
20 Nutrient Surplus Removal Incentive Act is an
21 economically and environmentally proactive
22 program that was adopted and supported by our
23 Farm Bureau members.

24 Again, I thank the commission for the
25 opportunity to comment on the importance of

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1 animal agriculture to this state and the proactive
2 efforts made by -- towards environmental water
3 quality and protection made by our regulatory
4 agencies, our research staff and agricultural
5 producers in general. Thank you.

6 MR. CARLIN: Thank you. I understand

7 Gene Pharr wants to come up and help answer
8 questions, is the point here.

9 MR. PHARR: Yes, sir. I'm Gene Pharr.
10 I'm a native of Lincoln which is about 20 miles
11 southwest of here. I'm a poultry producer. I've
12 been in the poultry business all my life in one
13 fashion or the other. I graduated from the U of A,
14 year of 1975, with a degree in animal science. I
15 went to work for the Campbell Soup Company and
16 have worked 26 years in the industry before
17 quitting about five years ago to raise poultry on
18 my own farm.

19 My concerns, first of all, me and a lot of
20 other farmers are very concerned about the
21 environment, about the pollution of the Illinois
22 River and of the watersheds, and there's a lot of
23 farmers out here doing a lot of things to make sure
24 we're good stewards of the environment and the
25 land that we live on.

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1 A lot of poultry litter is going out of this
2 area to other areas, a lot to Oklahoma along with
3 the farming areas of southeast Arkansas. I've
4 heard estimates of maybe 60,000 tons last year
5 was moved out of the area. And poultry litter is a
6 good soil amendment where it's needed and
7 certainly there has been too much in this area in
8 the past. But the laws that the state of Arkansas
9 has passed I think were a good thing to get those
10 few people who don't do a good job to maybe take
11 care of things a little bit better.

12 The industry is very important to me and
13 thousands of other farmers in this area. It's one
14 of the few things that a farmer in this area can
15 make money on. The cattle business has been
16 pretty good lately, probably not going to be with
17 the high grain prices.

18 One of the previous speakers talked about
19 money that was given to the -- or supported the
20 industry at the cost of me. Well, right now we're
21 -- the poultry industry is really hurting because of
22 subsidies that are being given to the ethanol
23 industry and I think the ethanol industry is a good
24 thing. We need to use other sources of energy
25 besides oil, but a subsidy right now, I believe, is

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1 being paid of \$.50 a gallon of ethanol and that
2 comes back to a \$1.40 that they can pay for corn
3 more than a poultry company who I grow for can.
4 So there are subsidies on every side that maybe

5 help or hurt but the farmers. It's a very important
6 industry to us because it's one of the few things
7 that --

8 MR. CARLIN: Well, getting back if we
9 could to the environmental issue, particularly
10 linking what you've shared with the previous
11 gentleman and the concern about the Illinois
12 River, and I'd like to have some help in better
13 understanding as to whether you believe what is in
14 place is going to address the gentleman from
15 Oklahoma's concern about the Illinois River.

16 MR. PHARR: I personally believe there
17 are things that are underway, the hauling of
18 poultry litter both being subsidized by grants and
19 that that is moving out based on the value of the
20 litter. I think there's a lot of room to continue to
21 move excess litter and certainly Arkansas has done
22 a lot to regulate the use of litter and commercial
23 fertilizer, which Oklahoma has not.

24 MR. CARLIN: Mary?

25 MS. WILSON: The excess litter that's

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1 being transported from this area, is it going to
2 areas where it's being purchased? What control is
3 there over where it is -- where it ends up?

4 MR. PHARR: Most of the litter to get a
5 subsidy has to go out of the nutrient surplus area
6 and to an area that is not a nutrient surplus area.
7 So not a nutrient surplus area means they're
8 buying a lot of phosphorus fertilizer to grow the
9 crops in that area, so it's being used in an area
10 where the phosphorus would be needed to make
11 crops grow.

12 MR. CARLIN: Jim?

13 MR. MERCHANT: In my home state we
14 also have a manure management plan regulated by
15 DNR. We find it only applies to producers that
16 have a certain number of animal units and then we
17 find even their compliance isn't what one would
18 wish. Is that the case in Arkansas or all
19 producers regardless of size required to file such a
20 plan, and what is the compliance like?

21 MR. PHARR: In the regulations Title 22
22 that went into effect a couple of years ago, it
23 requires anybody with two and a half acres or more
24 to have a manure management plan. Until this
25 year you were allowed to spread poultry litter at

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1 what was called a protective rate of a ton and a
2 half per acre. That has went out the door in 2007,

3 so now everybody has to have a plan.
4 As far as compliance on the plans that
5 have been checked that I'm aware of, I am on the
6 board of the Conservation District in Washington
7 County and so have some knowledge of that, we
8 have found very few problems in the people that
9 have been checked, so far it's all in compliance.

10 MR. CARLIN: Alan?

11 MR. GOLDBERG: Could you share how
12 you think of this industry in this area ten years
13 from now?

14 MR. PHARR: My personal belief that the
15 industry in this area will diminish ten years from
16 now, primarily because the cost of feed as you get
17 it closed out gets higher. The feed mills are being
18 built in Missouri, northern Oklahoma because of
19 the proximity to the grain belt, so I would expect
20 to see considerably less poultry in this area in ten
21 years. Also, the development of this area is
22 tremendous. Land is getting so high I don't think
23 you will see a new poultry operations cash flow in
24 this area.

25 MR. CARLIN: As a follow up very quickly

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1 to what you just shared, I mean, we can see that
2 the area is growing very, very fast and I assume
3 this only complicates the problems we've got
4 because you're going to have less and less land
5 you can spread manure on, which means there's
6 going have to be more of that manure moved
7 elsewhere, which means there's going to be some
8 kind of -- have to be some kind of program to make
9 that economically feasible or you're going to start
10 to shut down the poultry industry in this area.

11 MR. PHARR: Well, not necessarily.
12 They're talking about this spring -- and with
13 ammonium nitrate fertilizer being \$600 a ton,
14 Melody could probably give us an idea of what that
15 would cause poultry litter to be worth, but the last
16 calculation I did on my own poultry litter was
17 worth about \$42 per ton, the best I remember, and
18 that was with nitrogen, I think, around \$200 a
19 pound. So poultry litter is a very valuable asset
20 to be moved into areas where we -- where the crops
21 are grown.

22 MR. CARLIN: Have you done any work
23 that would indicate how far you could -- when is it
24 still economically feasible? I mean, you're not
25 going to take it to my buddy, Dan, in Montana or

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1 Wyoming, I assume.
2 MR. PHARR: Probably 50 miles --
3 MR. CARLIN: 50 miles.
4 MR. PHARR: -- or so without subsidies
5 based on past fertilizer prices.

6 MR. CARLIN: But you think up to 50
7 miles without any subsidization just because of
8 the value of the fertilizer?

9 MR. PHARR: There's a lot --

10 MR. CARLIN: Assuming there was a
11 nutrient need.

12 MR. PHARR: There's a lot to be moved
13 into the river valley, the Arkansas River Valley, on
14 the sod farms over in Oklahoma and in Arkansas
15 without subsidies.

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16 MR. CARLIN: Gentleman, thank you very
17 much. Dr. Goodwin?

18 MR. GOODWIN: Thank you very much.
19 I'm handing out copies of my presentation. I
20 couldn't get it here earlier.

21 MR. CARLIN: You're all the way from
22 Stillwater?

23 MR. GOODWIN: I'm sorry?

24 MR. CARLIN: You're all the way from
25 Stillwater?

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1 MR. GOODWIN: No, I'm here in
2 Fayetteville. My degree is from Oklahoma State.

3 MR. CARLIN: All right. They hire
4 Oklahoma State grads?

5 MR. GOODWIN: They do, they do. In
6 fact, they even hire people from Tahlequah, which
7 is where I'm from. I grew up in Tahlequah, honest,
8 on the family farm.

9 I'm speaking specifically about poultry
10 litter and some things that are being done now and
11 I want to give a little bit of background that Mr.
12 Teague has already demonstrated, but this
13 includes also value added. It does not deal with
14 specifically farm sales. This is the results of an
15 economic impact study that we completed at the
16 University of Arkansas. And we do this every
17 second year and this is the most recent data. It
18 was for 2003 because the data lags two years.

19 You can see here the importance of
20 agriculture. Ten percent of the gross state
21 product in Arkansas is agriculture. That far
22 exceeds any other state in the southeastern United
23 States. If you look specifically at the sectors, you
24 can see here crops, animal production or livestock,

25 and forestry. And you can see that 85 percent of

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1 the specific livestock activity is directly
2 attributable to poultry and I would caution you,
3 again, this does not include farm receipts. This is
4 only the value added part of agriculture.

5 Just to give you an idea for the six
6 counties in northwest Arkansas, Carroll, Madison,
7 Benton, Washington, Sebastian, and Crawford, we
8 did a study and this is what you see for the
9 economic impacts of poultry just in the six county
10 area. About 12 percent of the jobs, 13 percent of
11 the wages and ten percent of value added in the
12 six county economy are directly tied to poultry
13 production.

14 Now, I want to just speak for a moment,
15 and Dr. Waldroup approached this a little bit, but
16 you can see the areas in 1982, the red dots
17 represent a million broilers and you can see where
18 broiler production was in 1982. So if you'll now
19 advance to the next slide, this is in 2002, more
20 red in the same place. And I just want to
21 elaborate on that little bit. If you notice these
22 areas include the Ozarks, the Appalachians, the
23 farming areas of south central Mississippi, the
24 thin clay soils and northern Alabama and north
25 Georgia. The only exception is the Chesapeake

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1 Bay area which is very close to some huge
2 consumer markets.

3 Why is poultry production, and for that
4 matter concentrated animal production, in these
5 areas? No alternatives for land, for crop
6 production, small farms, traditionally lower
7 educational levels back in decades past, so all
8 these things go together to spell a way for small
9 farmers to remain on their own land and keep that
10 in their family.

11 Now, I emphasize with the next slide, a
12 little bit confusing, this is USDA data and they go
13 through a lot of gyrations about one-time
14 inventory and when the inventory is taken and the
15 size of the birds, so if we go to the next one, I
16 tried to decamp it down. This specific area as
17 comprised of four basic watersheds, the Elk River,
18 it's just about like Illinois and Beaver and you can
19 see here just an accounting of the number of
20 houses, the number of birds and the tons of litter
21 for all chickens including pullets and breeder hens
22 and for also turkeys and you can see there the

23 totals for litter is about 750,000 tons annually
24 produced in these four watersheds.

25 Now, I think this slide highlights the

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1 family or the small farm nature of poultry
2 production. All poultry growers in this area
3 contract with integrators and there's been some
4 discussion on that already. You can see here,
5 though, these numbers represent the number of
6 farms in each watershed, whether it's in Arkansas
7 or Oklahoma, that have one or two houses, three
8 or four houses, or more than four houses and the
9 average number of houses for poultry farmers in
10 this area is about three houses. So they're not
11 huge farms. And there are some newer farms that
12 are 10, 12 houses, eight houses, but most of them
13 are smaller farms and they operate on small pieces
14 of land.

15 Now, these red circles here, let me
16 explain this. The red circles represent a 30 mile
17 radius around the little red hash mark in the
18 center and these represent poultry complexes.
19 Each hash mark is a poultry complex and they will
20 on average slaughter between one and 1.2 million
21 birds per week and you can see the number of
22 poultry complexes in the Ozarks region and also
23 across western Arkansas and up into the central
24 part. And this, the darker colors represent where
25 crops are grown, so actually this is pasture and

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1 hay acreage.

2 And the next slide, which we'll go to that,
3 is the grain acreage. And you can see here that we
4 have excellent soil amendment, and I'll get to that
5 in the minute, the amount of nutrients far from
6 areas where crops are produced in large
7 quantities. So that highlights what we need to do
8 with litter is to move it some.

9 And what has really happened, this is just
10 a slide to sort of point out what many of us are
11 aware of, that we've had too much of a good thing
12 for too long in the same place. Poultry litter has
13 allowed this area to transform its cattle
14 production and hay production in very thin, clay,
15 rocky soils that become extremely droughted by
16 adding nutrients and organic matter that the
17 pasture badly needed. And so cattle production is
18 increased on these family farms. Almost 90
19 percent of poultry producers also have cow/calf
20 operations or they produce hay, so they're really

21 symbiotic type of activity.
22 And so what we've got to find out is about
23 ten years ago the science advanced to the point
24 where people realized that excess phosphorus was
25 an issue. Until then farmers had applied to the

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1 nitrogen take up rate for plants and phosphorus
2 accumulated because of the amount taken out of
3 the soil by the plants was about four times as
4 much nitrogen as it was phosphorus
4 us and it appears
5 in about equal ratios in poultry litter.

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6 So we've got some options. We can go to
7 on or near farm and economically is fine. That's
8 why the system has evolved like it has, but
9 environmentally it's limited based on the
10 comprehensive nutrient management plans that
11 Mr. Pharr spoke about.

12 Off-farm, environmentally that's really
13 good, but it's economically infeasible today, and
14 I'm going through a couple of things. So we look
15 at off-farm options, centrally coordinated
16 enterprises or value added manufacturing sales.
17 So what we want to try to do is what do we do with
18 the excess litter. It needs to be moved someplace,
19 but right now -- in the past export has not been
20 sustainable. We had some grants that subsidized
21 up to \$10 per ton for movement of litter and that
22 \$10 ran out at about 160 miles, but even with the
23 \$10 it wasn't economically competitive.

24 So we have some solutions here, look at
25 raw litter, pelletizing, composting, or energy

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1 production. I assume Mr. Rupert Fraser here will
2 speak about energy production.

3 This is an example of how you might
4 manage off-farm litter, and in the orange square is
5 a baler that I want to speak a little bit about. A
6 particular program here that I'm involved with has
7 funding from various sources. It's very
8 well-funded in the research arena. The small
9 business innovative research grant is looking at
10 preparing a litter baler that would compress litter
11 at about a 4:1 ratio in one and a half to two ton
12 plastic wrapped bales for shipment into crop
13 areas. And I'll show you a picture of that in a
14 moment.

15 Another thing we're looking at is where
16 would we locate this? Obviously, it has to be
17 economically located for transportation and we've

18 already done the work. We've identified two sites,
 19 one at Decatur and one at Lincoln. In
 19 fact, it's
 20 less than a mile from Mr. Pharr's farm.
 21 We're also looking with EPA at some
 22 co-processing with dewatered municipal biosolids.
 23 And the compounded population growth here in
 24 Northwest Arkansas is about 40 percent per
 25 decade. It's been phenomenal. This is the fourth

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1 fastest growing area in the country in the past and
 2 so there's a lot of people pressure. Plus, 150,000
 3 tons of dewatered municipal biosolids are
 4 produced in these two counties, so something has
 5 to happen.

6 NRCS monies have come in to help us
 7 continue this. First, we looked at developing some
 8 markets with BMP's, Inc. and what we did there
 9 was develop markets to ship litter out of the
 10 cropping areas.

11 And the final thing that we're doing is
 12 looking at developing some software packages to
 13 help litter producers and purchasers match. This
 14 is interactive. It's a bid system and it also helps
 15 them evaluate the litter.

16 And the last couple of things I'll show
 17 you, there was some talk about the value of the
 18 litter. Based on January 15th prices for litter,
 19 you can see there raw litter has an approximate
 20 value of \$58 per ton. Raw litter combined with the
 21 -- well, the biosolids have a value of about 61
 22 bucks a ton, so if you combine that you get in
 23 mid-50s range for actual nutrient value of the
 24 litter. Historically, though, the price that people
 25 pay is about 25 to 28 bucks, so the value of the

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1 litter is far greater than the price the market has
 2 been willing to bear and this is just a couple
 3 pictures of the baler. These bales can be stored in
 4 the field without storage and it really facilitates
 5 use of the litter in crop producing areas. Thank
 6 you for your time.

7 MR. CARLIN: Michael?

8 MR. BLACKWELL: Thank you very much
 9 for your presentation. I'd like for you to
 10 summarize what I think I heard by answering a
 11 question that has to do with population
 12 projections for the United States. We just passed
 13 300 million as a nation and most of us will see 400
 14 million in our lifetime given the rates of growth.

15 If we consider a relative increase in poultry and
16 other edible protein products, what do you think
17 all of this is saying to us today, are we going to be
18 able to handle the litter for a population that size
19 given the immensity of growth on the animal side?

20 MR. GOODWIN: I'm convinced we can, if
21 for no other reason than the escalating energy
22 prices. Right now anhydrous ammonia is over
23 \$400 a ton. It's going up and up every year. And
24 we have a product here that contains an excellent
25 source of carbon, trace minerals, microbes to

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1 reinvigorate the soil in addition to the minerals.
2 So I think as we get inventive with compressing
3 into the bales and doing other things, palletizing,
4 and there are a lot of ways that we can process
5 this litter, either to use it for land application
6 growing crops or for energy purposes.

7 MR. BLACKWELL: Just one follow-up.
8 Any concerns about other problems that may come
9 with that? I mean, obviously there are uses that
10 you have identified that will continue into the
11 future and maybe new ways to process the product.
12 What should we be concerned about, if anything?
13 You've painted a rosy picture and I guess I'm just
14 trying to make sure I understand that it's all rosy
15 as you said.

16 MR. GOODWIN: Well, I'm not sure it's all
17 rosy. It's not without its challenges, but it has a
18 lot of opportunities. If you look at me, you know,
19 I could weigh 40 pounds less and probably be
20 healthier, so I'm saying the thing we have to watch
21 for is to make sure we appropriately utilize the
22 litter as science prescribes so that we won't get
23 excess usage. And that's true with any planning.

24 MR. CARLIN: Fred?

25 MR. GOODWIN: Thank you.

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1 MR. KIRSCHENMANN: I was interested in
2 your numbers in terms of smaller farms and, you
3 know, one or two or three units. Have you or your
4 colleagues done any numbers on the net return to
5 farmers, these smaller farmers that are using
6 these operations?

7 MR. GOODWIN: I have done several
8 papers and that's one reason I passed out my card.
9 Many of you may want to ask for these, but a
10 recent one in the Journal of Applied Poultry
11 Research shows that returns per square foot are
12 about \$1.70 on average. Now, that's about what

13 they were in 1979. The difference is farmers are
14 controlling about twice as many square feet of
15 production as they had. In gross terms, just gross
16 revenues not subtracting anything out, for an
17 average size housing unit between 25 and 30,000
18 per year per house for gross revenues. Obviously,
19 out of that they have to pay interest, utilities, et
20 cetera, but that's about what we're seeing and
21 obviously as the house gets paid out your return
22 gets a lot bigger.

23 MR. KIRSCHENMANN: And the net return
24 per house is what?

25 MR. GOODWIN: Depending on what stage

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1 that you're in and what your energy prices are,
2 you're looking at about \$9-10,000 per house and,
3 of course, that's -- you know, I hesitate to give
4 exact numbers because there's so many variables,
5 but I also have a spreadsheet that will allow that
6 to be estimated if you will contact me.

7 MR. CARLIN: Bernie?

8 MR. ROLLIN: In Colorado people sell
9 dried poultry waste for lawns and gardens. Is that
10 market saturated or can you envision that for the
11 future as a natural lawn fertilizer?

12 MR. GOODWIN: There are some farms
13 right now looking at composting products and also
14 pelletized and bagged products and the key there
15 is to hit the market niche because when you
16 pelletize you add about \$60, between 40 and \$60 a
17 ton, so you have to get these niche markets and be
18 able to supply enough to get into a Lowe's or a
19 Home Depot or somebody like that. But, yes, I
20 think there's a niche market for that.

21 MR. CARLIN: Brother David?

22 MR. ANDREWS: You and a number of
23 speakers have alluded to the fuel versus food use
24 of corn and also to the fact that energy prices are
25 increasing on poultry operations. We heard -- we

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1 visited a farm the other day where they were at
2 significant monthly expenditures for energy use.
3 And we heard one gentleman project that the
4 poultry industry is, here in this state, on the
5 decline and suggested that within ten years we'll
6 have significantly fewer producers or -- fewer
7 producers. I'm wondering more concretely what
8 you might estimate the poultry units condition will
9 be over the short haul in the light of increased
10 energy production and the doubling or tripling of

11 the price of grain?

12 MR. GOODWIN: Well, there were two or
13 three parts to the question. I'll address the feed
14 cost first. That would impact directly the
15 integrators which supply the feed, and to the
16 extent that that price increase that's necessary
17 would cause a contraction in chicken meat
18 demand, that could cause fewer placements on the
19 farms. That's one possibility.

20 With respect to energy prices, there are
21 people that I know that have 12-house operations
22 that last month had over a \$30,000 natural gas
23 bill. So that's not to be ignored and there are
24 some initiatives in the state of Arkansas right now
25 to look at reducing or exempting sales tax on that.

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1 I know there are some companies that have
2 considered increasing their fuel allotments, so
3 there is some effort there. But I think in the
4 short-term marginal producers given these
5 squeezes, there could be some contraction as
6 people decide to sell their land for development
7 purposes and close out their poultry operation.

8 MR. CARLIN: Do you feel that the
9 economic issues you've shared with us will drive
10 the kind of solutions we need to deal with litter for
11 the most part or does there need to be more
12 investment into research for new ideas?

13 MR. GOODWIN: Well, I -- you know, an
14 economist, Harry Truman, says on the one hand
15 and on the other hand you wanted a one-handed
16 economist, but I have two answers to that. I'm
17 very much a market -- free-market economist;
18 however, I'll be the first one to say when the
19 market is not solving a problem there needs to be
20 government intervention. And I think the
21 government can best intervene by putting in
22 research dollars to come up with new and
23 innovative ways to deal with animal byproducts
24 and manures and I also think the tax credit that is
25 being considered now in Arkansas and Oklahoma

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1 has funds going into the EQIP program with the
2 NRCS. These kinds of initiatives help bring the
3 cost of looking at manure management in
4 alternative ways down so that the market hopefully
5 will catch up to that as energy prices increase.
6 Maybe a few years out, the market can address it,
7 but right now the market can't address it.

8 MR. CARLIN: Very good. Thank you.

9 MR. GOODWIN: Thank you.

10 MR. CARLIN: Rupert Fraser?

11 MR. FRASER: Good afternoon. My name
12 is Rupert Fraser. I'm not from around here if you
13 can tell it or not. No, my office is based in
14 Pennsylvania. I'm here to tell you about
15 Fibrowatt's solution to what to do with poultry
16 litter. We have a technology which builds poultry
17 litter fired power plants. It's proven technology.
18 It's carbon neutral. We simultaneously improve
19 and protect local water resources while producing
20 local, green, renewable energy. It's proven
21 technology because we've been doing it for 14
22 years in the UK. We built the world's first, second
23 and third plants to do this. We're currently
24 building a plant in Minnesota that is going to burn
25 700,000 tons of turkey litter. That was financed

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1 in December 2004 and is due to come on stream in
2 two months time.

3 It is; however, for us very important to
4 remember that we work in partnership with the
5 poultry industry. What we see ourselves as doing
6 is helping to make poultry farming more
7 sustainable and helping poultry farmers to have
8 more flexibility in what they do with their
9 byproducts.

10 I'm going to look very quickly at our track
11 record and get onto what I hope you'll find a bit
12 more interesting in terms of how it works. There's
13 a picture of somebody you may recognize on the
14 left, although he doesn't look quite as young as
15 that anymore, but that was an environmental
16 award that we won back in the 1990s. This is our
17 first plant that's been running now for 15 years in
18 the UK. It burns about 170,000 tons of poultry
19 litter and it has proved this technology is reliable
20 and works well.

21 Our second plant burns poultry litter and
22 more recently has switched across to burning meat
23 in bone meal because in the UK meat in bone meal
24 is no longer allowed to be used as an animal feed
25 additive, but, of course, since meat and bone meal

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1 was an ingredient in poultry feed and, therefore,
2 in poultry litter we were able to prove that our
3 technology if it can handle one animal byproduct
4 can handle others.

5 This was our third plant built in 1998.
6 This was representative of scaling up of our

7 technology. It burns half a million tons a year of
8 poultry litter. It's located in a very
9 environmentally sensitive area in the middle of a
10 national forest in the UK right next to a trout
11 stream that it puts nothing into and is surrounded
12 by material oak woodland which is heavily
13 monitored by environmentalists and local residents
14 alike. And we believe this project speaks for itself
15 in terms of proving that we can produce a plant
16 which fits well within the local area.

17 Moving on to the Fibrominn project, this
18 is the plant that we're building in Minnesota. As I
19 said, it will burn 700,000 tons of primarily turkey
20 litter. West central Minnesota is the largest
21 turkey producing area in the country producing
22 about 45 million turkeys a year and this plant
23 occupies about a 50 acre site. It has an electricity
24 contract to sell its renewable energy to Northern
25 State Power of Minnesota that lasts for 21 years.

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1 It has signed up the majority of the poultry litter
2 it needs under long-term contracts with the
3 poultry farmers. And remember, none of them
4 were forced to sign with us. They came to us
5 because they liked the look of what we were
6 offering them in terms of a long-term alternative
7 use for their poultry litter. But above all, this
8 plant gives us the credibility to say we can do
9 this, it is real, it's got plenty of challenges, but
10 that's what we do.

11 And here's a couple of pictures just to
12 show you what it looks like. This is the turbine
13 rotor inside the plant. That thing is actually
14 about seven feet tall and about 15 feet long and
15 that's what the steam will drive to make the
16 electricity. And that is the site as a whole,
17 slightly compressed because I think we've got a bit
18 of a perspective problem on the projector, but it
19 is, as you can see, a large site. There's about
20 three or 400 Minnesota workmen up there at the
21 moment assembling things and in about two
22 months time, I would say, it will fire up for the
23 first time on poultry litter and we will be obviously
24 welcoming anybody from the commission who would
25 like to come and look at it.

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1 This is perhaps more interesting to you on
2 how the process works. I just want to give you a
3 quick photographic run-through just so you can
4 see for yourself that this is a practical solution.

5 These are poultry houses. They're
6 actually British poultry houses, but they're pretty
7 similar to the ones that we have found all over the
8 United States. What we do is we help the farmer
9 remove the poultry litter from his house more
10 quickly, more efficiently and with greater
11 biosecurity. One of the innovations that we
12 brought was the introduction of this covered
13 conveyor which reverses into the poultry house.
14 The farmer fills it with his little bobcats inside
15 and it means the litter only sees the light of day,
16 if you like, for a very brief period as it enters the
17 top of the truck. Immediately after that the truck
18 is tightly tarpaulined.

19 The truck drivers are very much conscious
20 of the need for biosecurity, the need to improve
21 both in terms of its rapid turnaround at the farms
22 and keeping their trucks clean and following
23 pre-agreed routes between each poultry farm and
24 the power plant. When the truck arrives at the
25 power plant, its load is weighed and tested. We

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1 want to make sure that they've sent us something
2 which we can indeed recover energy from.

3 The truck then reverses into one of the
4 atmospherically controlled fuel reception bays. We
5 control the atmosphere in a very simple way.
6 When you're burning poultry litter to produce
7 energy, you're burning something which is nearly
8 50 percent water. You need to put a lot of air into
9 the furnace to make it burn because remember,
10 we're not coal burning with fossil fuel or anything.
11 Once the fire is up and running, it's
12 self-sustaining. So we're blowing the wet air into
13 the furnace to make it burn and we draw that air
14 from the fuel reception storage hold. What that
15 means is that if you open the door there, the air
16 flow is inwards past you and if the air flows
17 inwards, the smell can't get out. It's simple, but
18 it works and the residents of the city of Flatfoot,
19 which is 10,000 people one and a half miles away
20 from this plant, have gone on record saying it
21 works.

22 Inside the facility the trucks tip onto
23 conveyor belts which in turn go to feed the boiler
24 and to be mixed and homogenized. We've learned
25 how to make sure the poultry litter, which is a

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1 natural substance and varies naturally, how to
2 make it burn evenly and securely in such a way as

3 to maximize the efficiency of the plant.
4 As the trucks leave our facility, this is
5 very important, they are cleaned with two layers of
6 high-pressure water spray in a sealed system and
7 using a biodegradable biocide. This has
8 represented for the British poultry industry, and
9 will be representing for the Minnesota poultry
10 industry, an improvement in the biosecurity of
11 manure management which is very valuable to
12 them. And the poultry farmers in the UK have told
13 us that it is valuable to them, so they can be
14 relaxed now -- not relaxed, because they never
15 relax. All poultry farmers are working hard to
16 prevent disease at all times, but this adds to their
17 confidence that a good job is being done in terms
18 of minimizing the possibility of
19 cross-contamination from poultry trucks, poultry
20 litter trucks.

21 Inside the plant is the same arrangement
22 as a typical solid fuel power plant with the fuel
23 coming in, being combusted at about 1,500 degrees
24 Fahrenheit sufficient to sterilize anything that's in
25 the poultry litter. The dust and acid gases are

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1 removed using state-of-the-art, best practice
2 emissions control equipment.

3 We recover all of the ash we can because,
4 of course, that's a great fertilizer. It still has
5 almost all of the nutrients that were in the poultry
6 litter but at a much higher concentration and only
7 ten percent of their former weight, so we can
8 afford to transport that ash to where the litter is
9 -- to where the nutrients are actually needed.

10 And in the bottom of the system is a
11 recycling boiler where the water is boiled, steam
12 drives the turbine and it's condensed back to
13 water.

14 That's the inside of our fuel hold and the
15 next slide is fuel conveyor belt showing the fuel on
16 its way up to the boiler. The final picture there is
17 of the interior of the boiler.

18 And this brings us to the last few slides
19 that I wanted to focus on, which are the benefits
20 of what we do. And here I would ask you if there's
21 anything which I say here which you think sounds
22 like just my opinion, you know, please, do go to,
23 for example, the web site of the Swift County
24 Monitor, which is the local newspaper adjacent to
25 the plant we're building in Benson, Minnesota

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1 where the editor came to the UK himself, talked to
2 the local residents, talked to the local poultry
3 farmers and it's his view that I think we're
4 representing here. It's not just our view. We
5 believe that what we do helps sustain the poultry
6 industry. It gives them a long-term solution, a
7 long-term alternative use for poultry litter and
8 interestingly a 12 month a year use for poultry
9 litter because at the moment if you're poultry
10 farmer and you want to get rid of your poultry
11 litter when there are crops on the land, you can't.
12 And, of course, we also improve the biosecurity
13 and help with disease control and hopefully reduce
14 the need for that.

15 The benefits to the local economy and
16 neighbors I won't dwell on. They, I think, speak
17 for themselves, including there are new highly
18 skilled jobs being introduced into the area. There
19 is a lot of spin-off work for power plant,
20 maintenance, welding, fitting and so on. There is
21 support for the sustainability of the poultry
22 industry and we, as I said, are good neighbors, we
23 believe.

24 And finally the benefits to the
25 environment, again, are fairly self-evident. This is

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1 free energy being produced from local resources in
2 rural areas where sometimes the local grid is
3 actually weak. We are recycling the nutrients in
4 the ash. We are helping to improve local water
5 quality and we are, of course, helping to reduce
6 greenhouse gas.

7 And I will finish with a picture of the
8 carbon cycle showing the biomass which has
9 absorbed carbon dioxide from the atmosphere
10 going through the chicken to produce the manure
11 and then to the electricity generation showing that
12 it is a closed circuit in terms of carbon dioxide
13 production and, of course, also in terms of the ash
14 recycling of the nutrients.

15 MR. CARLIN: Very good. We're going to
16 have to have some questions because we cannot
17 count on our Swedish-Norwegian friends in
18 Minnesota to have really done their job with you
19 Brits. I mean, my apologies, but we just can't
20 totally trust them.

21 MR. FRASER: They're nice guys, but
22 you're right. You should do your own due
23 diligence.

24 MR. CARLIN: The poultry farmer you
25 work with, you don't pay -- you don't buy the

1 litter, you just take care of it for him?

2 MR. FRASER: No. We took a decision
3 very early on that made great business sense for
4 us to say we are here because the poultry industry
5 is here. It's very important for us, therefore, to
6 make sure that our effect on the poultry industry
7 is beneficial not just in terms of that in improving
8 biosecurity that, you know, reducing the headache
9 the poultry farmer has in terms of managing his
10 byproducts, but also economically neutral.

11 So what we will do is we will make an
12 offer to all the poultry farmers in an area and say
13 we are prepared to pay what we have through
14 surveying the market worked out as about the
15 average of what you're getting at the moment. The
16 difference is we're going to underwrite that for ten
17 years, and generally speaking, we find that a lot of
18 poultry farmers find that an attractive option and
19 they sign up for us. But, no, we pay for the
20 poultry litter.

21 MR. CARLIN: Okay.

22 MR. FRASER: We believe it's in our
23 interest to pay for the poultry litter.

24 MR. CARLIN: And the energy you
25 produce, you've obviously got a buyer that sees

1 that price as something that's attractive to them
2 to buy that energy from you?

3 MR. FRASER: Clearly the secret to what
4 we do is the fact that somebody attributes value to
5 the production of green energy and there, I
6 believe, I can say with great confidence that we're
7 on the coattails of a trend that is pointing firmly
8 in the right direction. And indeed, in the five
9 years that I've been coming out here and meeting
10 people and talking about what we do, I've seen
11 that part of our equation change quite
12 dramatically. A lot of people now who used to say,
13 well, green energy is never going to become really
14 valuable here are now saying green energy, tell me
15 more, I need some of that.

16 MR. CARLIN: All done without any
17 government assisted tax incentives?

18 MR. FRASER: I think like any part of the
19 energy industry it is impossible to tell where the
20 actual market is because there is so much
21 government setting of energy prices. You know, if
22 you were to say what does coal-fired energy cost,
23 the answer is nobody knows because there are so

24 many subsidies in there it's impossible to work it
25 out. What I would say is the market drives the

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1 way in which policymakers respond and, although
2 at the federal level the United States has not
3 signed up to Kyoto. At state level, I'm hearing
4 people again and again and again saying that we
5 need some renewable energy. We need this state to
6 start producing its own energy. We're fed up with
7 relying on other people's oil. Let's do something
8 about that. That's the trend that we are finding is
9 making what we do practical rather than just
10 theoretical.

11 MR. CARLIN: Jim?

12 MR. MERCHANT: Very interesting. Two
13 questions. One, in terms of the emissions, you
14 present state-of-the-art emission controls. Are
15 your emission controls superior to those for a
16 similar plant, to a coal-fired power plant in terms
17 of SO2 NOX particulates?

18 MR. FRASER: We believe so. In
19 Minnesota the Minnesota Pollution Control Agency
20 gave a very, very thorough investigation to
21 everything we were proposing to do and required
22 us, as is appropriate, to use the very best, the
23 latest technology. We're given -- we're given no
24 favors and we don't ask to be given any favors. We
25 want to live up to the latest that can be done, so

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1 we believe that we can achieve better emissions
2 than today's ten year old coal-fired power plants
3 or gas-powered power plants, that we can achieve
4 as good emissions as a new power plant in any
5 discipline that would be being built today with
6 today's regulations and we would make it our
7 target to do that.

8 MR. MERCHANT: Okay. Second
9 question. Is there a market to extend this
10 technology, say to hog waste? That's a much
11 bigger issue, a much bigger environmental issue
12 and if you could solve that one you'd have a real
13 market.

14 MR. FRASER: It won't surprise you to
15 know we are working very hard on that. My father
16 founded this company 15 years ago. We've burned
17 7,000,000 tons of chicken and turkey waste in that
18 period and we have experimented with adding a
19 number of other clean biomass fuels. So where
20 there are organic -- organically originated farming
21 or agricultural or food residues that could be

22 added into the mix, we are experimenting with
23 them.
24 Hog waste is a very important one there
25 and we're working actively to see if we can either

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1 mix it with the poultry litter having perhaps dried
2 it centrifugally or indeed come up with a
3 technology that could deal with it on its own, but
4 we are confident given our track record. We've
5 burnt chicken litter, turkey litter, meat in bone
6 meal, wood chips, food processing wastes, chicken
7 processing wastes, out of date dog biscuits. I
8 could go on for some time. We've burned a lot of
9 -- as long as they're not chemically contaminated,
10 our technology can, generally speaking, work with
11 them.

12 MR. CARLIN: Fred?

13 MR. KIRSCHENMANN: Yeah, a
14 fascinating concept and generates a lot of
15 questions. I have three, I guess. First of all, has
16 anyone done a full life cycle analysis of this
17 system for you, for the company?

18 MR. FRASER: Various studies have been
19 done about parts of it. To give you an example,
20 somebody said to us, well, aren't you creating a lot
21 of extra transportation, isn't the litter traveling
22 extra miles? So we had a study done on that.
23 What turned out was that poultry litter was
24 already being transported around the place. What
25 we do is we replace a lot of small vehicles moving

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1 poultry litter around with fewer large vehicles
2 moving it on three to five routes and the net effect
3 is a positive one. I wouldn't say that I could
4 immediately lay my hands on a sort of a full life
5 cycle analysis, but we've certainly looked at most
6 of those kinds of issues and not come up with
7 anything that we didn't like.

8 MR. KIRSCHENMANN: And in terms of
9 energy efficiency ratios, energy in for energy out,
10 do you have an analysis of that?

11 MR. FRASER: Well, we are limited by the
12 traditional combustion technology which has a
13 thermal efficiency that, you know, recovers a
14 certain amount of the energy inherent in the
15 material and loses a certain amount of it in
16 condensing. We are always on the lookout to see
17 whether we can incorporate into our plant design a
18 customer for the heat and thereby raise the overall
19 thermal efficiency of our plant. That's

20 tremendously difficult to do, not technically but in
21 economic terms because while its easy to find a
22 buyer for electricity who will sign a 20 year
23 contract and be himself a bankable entity like a
24 utility, it's very difficult to find a buyer of heat
25 who will give your financiers that same 20 year

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1 confidence.

2 MR. KIRSCHENMANN: Okay. And my
3 final question is you say you buy the litter from
4 the growers and then process it and then the ash
5 goes back to the field, so I'm assuming you sell the
6 ash back to the growers.

7 MR. FRASER: Sell it to the same
8 growers. Sorry. We market the ash to farmers
9 who want it who may be, of course, a long way
10 away because it's easy to transport. Sorry.

11 MR. KIRSCHENMANN: Yeah, but my
12 question is what nutrient value does the ash have?
13 In other words, what have you lost by extracting
14 the energy and then how does that figure out in
15 terms of cost per unit of fertilizer?

16 MR. FRASER: Poultry litter, as I
17 understand it, in terms of NPK is about three,
18 three, three. Three percent, three percent, three
19 percent. Poultry litter ash is about 20 percent, 18
20 percent, zero -- sorry, zero, 20, 18. So the
21 nitrogen is gone --

22 MR. KIRSCHENMANN: Gone.

23 MR. FRASER: -- but the phosphorus and
24 -- so it's mainly turned into free atmospheric
25 nitrogen, which is 40 percent of the air we breathe

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1 and gone up the chimney. But the phosphorus and
2 potassium are all still there and have gone up in
3 concentration enormously and, of course, all the
4 other micronutrients like zinc, magnesium,
5 manganese, copper and so on are there in good
6 balances and it turns out that this as a fertilizer
7 is regarded by the fertilizer industry as unusually
8 rich in terms of those nutrients.

9 MR. CARLIN: Michael?

10 MR. BLACKWELL: If you are
11 concentrating the substances that you just named,
12 I didn't hear arsenic. Could you comment on that?

13 MR. CARLIN: I'm pleased to be able to
14 comment on arsenic. The Minnesota Pollution
15 Control Agency looked particularly at the arsenic
16 issue, as it should do, and they concluded that the
17 levels of arsenic in poultry litter were actually

18 slightly lower than the background level of arsenic
19 in the west central Minnesota environment and
20 they concluded that the arsenic emissions from
21 our process, which was so low it would be very
22 difficult to measure, was certainly two orders of
23 magnitude less than the threshold where they
24 started to be concerned. They regarded that as,
25 you know, being adequate and concluded it was

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1 okay.

2 MR. CARLIN: Alan?

3 MR. GOLDBERG: Were there other
4 potentially toxic metals, mercury, lead, that you
5 looked at?

6 MR. FRASER: The conclusion in terms of
7 mercury was pretty similar to the conclusion for
8 arsenic. The level of mercury in poultry litter,
9 which is there because it's in the background, is
10 well below the level at which the Minnesota
11 Pollution Control Agency thought there was any
12 concern.

13 MR. CARLIN: Michael?

14 MR. FRASER: But, I mean, basically
15 nothing toxic is eaten by a chicken at levels that
16 people who regulate chicken feed would be
17 unhappy with. And since that's all we're burning,
18 it's difficult to see where it'd be toxic coming from
19 our plant burning.

20 MR. BLACKWELL: Just a quick question
21 because in some operations arsenic is actually fed
22 and you're saying in spite of that it's below
23 background?

24 MR. FRASER: That's what I'm saying the
25 Minnesota Pollution Control Agency's tests, so,

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1 yes, you know, arsenic may be being had but it's
2 in such small quantities that in terms of its effect
3 on the poultry litter and on our combustion, they
4 studied it and they concluded it was okay.

5 MR. BLACKWELL: It's not a question
6 about the effect of the litter. The question is the
7 product that you call the ash that later gets
8 distributed back onto the land. I'm concerned
9 about the levels that you are reapplying to land as
10 a result of your process.

11 MR. FRASER: Well, as I said, they
12 studied the actual litter and found that the levels
13 in the litter were low enough. Clearly the ash
14 itself was also the subject of separate studies to
15 make sure that its levels are also acceptably low

16 and will be regulated appropriately by the
17 Minnesota authorities to ensure that.

18 MR. CARLIN: I believe that does it. I
19 would just simply request that -- I'm assuming
20 you'll be staying in this area a few days to check
21 out real estate opportunities and that if you're
22 interviewed by local press would you give credit to
23 the commission for the huge opportunity we've
24 given you to advance your economic interest.

25 MR. FRASER: Thank you very much for

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1 the time.

2 MR. CARLIN: Thank you. I would say to
3 the staff if we would have started with this
4 gentleman then we could have eliminated two or
5 three speakers because we would have had the
6 problem solved, or so it appears.

7 Ken Midkiff? We haven't missed anybody.
8 We're just rolling right along, rolling right along.
9 From the Missouri Sierra Club, Ken Midkiff.

10 MR. MIDKIFF: Yes, and for the record I
11 live in Colombia, Missouri.

12 MR. CARLIN: Columbia.

13 MR. MIDKIFF: And we have occasionally
14 played the Arkansas Razorbacks and occasionally
15 they have won.

16 MR. CARLIN: That is okay, it's when you
17 play Kansas State University that I get concerned.

18 MR. MIDKIFF: Well, Kansas State came
19 to Missouri and we don't want to talk about that.

20 MR. CARLIN: I wouldn't have raised it if
21 I hadn't known the score. And start his time now.

22 MR. MIDKIFF: Fresh country air? No,
23 not since concentrated animal feeding operations,
24 CAFO's I'll call them now, have been popping up
25 like fetid mushrooms all over my state, the state of

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1 Missouri. And instead of mowed fields, freshly
2 turned earth and the pleasant smell of cows in a
3 pasture resulting in sighs of contentment, all too
4 often the odiferous country air stimulates gagging
5 and retching.

6 Now, eventually the water quality and
7 rural economics will be impacted as you have
8 heard and as you will hear. But the first and
9 loudest and most enduring complaint about CAFOs
10 is stink. Now, I assume that others, as I said, will
11 talk about the effects of the water quality and the
12 family farmer in rural economics. I want to focus
13 on air quality, odor, stink.

14 Stink and odor, of course, are caused by
15 many compounds, many of which are unhealthy,
16 such as high levels of hydrogen sulfide and
17 ammonia released by CAFO's and many other
18 compounds. The hog industry says there are over
19 260 compounds.

20 Those who support the factory life of mega
21 operations in which hogs, chickens and cows are
22 kept in confinement buildings with hundreds or
23 even thousands of other critters all point to urban
24 and suburban movements as those who complain.
25 While that is seemingly a sound assertion and one

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1 that is embraced by the likes of Premium Standard
2 "Farms", let the record show that I put a quotation
3 mark on "Farms", Tyson's, the American
4 Dairymen's Associations, Smithfield and the Farm
5 Bureau, which is nothing but a shell for
6 agribusiness, that assertion, the assertion about
7 urban move-ins doesn't hold water.

8 Looking at the facts of actual
9 demographics in Missouri, my state, there is no
10 migration from urban to rural areas. The opposite
11 is true. Urban counties in my state such as
12 Boone, Columbia, Jasper, Joplin, St. Charles -- St.
13 Charles, Green, Springfield, Jackson and Kansas
14 City, the north suburbs of Kansas City in Platte
15 County and Buchanan, St. Joseph, these urban or
16 suburban areas are experiencing population
17 increases ranging up to six percent since 2000
18 while rural counties are losing folks due to birth
19 rates, birth to death rates are breaking even. It is
20 no coincidence that up in northern Missouri where
21 Premium Standard Farm CAFO's are all over the
22 place, Putnam, Sullivan and Mercer counties,
23 population decreases are the norm.

24 Even in such places as McDonald County
25 in Missouri where big chicken reigns supreme, the

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1 county essentially broke even. And according to
2 the Census Bureau, the U.S. Census Bureau, there
3 was no in migration. In all these counties the rate
4 of crime has increased dramatically. Drive-by
5 shootings, drug abuse and sales, child abuse,
6 spouse abuse, teenage pregnancies, all of these
7 are all too common in the counties where
8 agribusiness corporations have moved in.

9 But never to be diverted by truth or facts,
10 big ag advocates keep claiming that lawsuits are
11 filed move-ins, as if reputation -- repetition of a

12 lie somehow makes it a reality. It is not urban
13 folks that are complaining and filing all the
14 lawsuits. It is longtime rural residents.

15 In the current cases about odor and
16 quality of human health and quality of life, there
17 are over 200 areas, one company, Premium
18 Standard Farms. It is farmers who have inherited
19 the land from their father who in turn inherited it
20 from their fathers who have done the filings. It is
21 not unusual at all for the loudest complaints
22 about the stink from giant hog, chicken and cattle
23 operations come from people who raise those
24 animals in more traditional and more sustainable
25 ways. It is not animal agriculture that is the

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1 cause of the big stink. No one complained about
2 the neighbor's hog lot or chicken house or dairy
3 barn. Rather, it is the industrial methods of
4 raising these animals, concentrated feeding
5 operations causing the problems.

6 As my FFA project, I grew up on a farm
7 while I was in high school, I raised hogs. Not
8 many by today's standards, I had about 12. That's
9 4.2 animal units for those of you who are quick at
10 math, but my mother insisted that hogs be kept
11 downwind of our house and our backyard. In
12 addition to stinking up the house, any clothes --
13 our clothes that hung out on the line to dry ended
14 up smelling like hog manure. Now, even my 12
15 hogs didn't smell like roses. Thousands and
16 thousands create gut-wrenching stink.

17 Hog manure is particularly odiferous and
18 those living downwind from a few thousand swine
19 are overwhelmed by the stench. But to listen to
20 the representatives of livestock organizations, you
21 would get the impression that any attempt by the
22 state or federal government to control litter is
23 going to put all farmers out of business. This is,
24 of course, patent nonsense.

25 While Premium Standard, owned by

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1 ContiGroup with Henry Kissinger a board member,
2 or Tyson or Moark, which is owned by Land O
3 Lakes by the way, or the Hilton Dairy now the
4 Missouri Dairy near Carthage and owned by the
5 Missouri Soybean Association, go figure, many of
6 those entities may encounter some difficulties.
7 But it is likely they have the wherewithal to install
8 devices or to switch to methods that will keep
9 their stink down to a level that does not offend

10 their longtime rural neighbors. Since that is
11 unlikely -- or, I'm sorry, since that is likely to cut
12 into the bottom line profit, they won't do it
13 willingly. However, no matter how loud or how
14 long the pork producers or the American Dairy
15 Association squeals, it is highly unlikely that
16 independent and diversified family farmers will
17 suffer. State and federal laws and regulations are
18 applicable to CAFO's of more than 1,000 animal
19 units. A hog is 2.5 animal units. A dairy cow is
20 .7. 1,000 broilers equals one animal unit, 30
21 laying hens to make one animal unit.

22 Now, not many real farmers have 2,500
23 hogs or 750 cows or 100,000 broilers or 30,000
24 laying hens. Agribusinesses do. They own the
25 animals on contract growers operations.

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1 Agribusinesses own that many animals. And that
2 is where federal and state laws and regulations are
3 and should be targeted to agribusiness
4 corporations headed in Bentonville, Arkansas or
5 Omaha, Nebraska or Chicago, Illinois, not to
6 farmers in Missouri and certainly not to folks who
7 have been on the farm for years and years and
8 years.

9 Now, I end where I started. Manure and
10 urine from thousands of hogs or millions of
11 chickens stink. It is longtime rural residents who
12 object to the stink, not urban move-ins.
13 Repetition does not equal reality. No matter how
14 many times an untruth is told, it is still a lie.

15 MR. CARLIN: Michael?

16 MR. BLACKWELL: Thank you for the
17 presentation.

18 MR. MIDKIFF: Thank you.

19 MR. BLACKWELL: I would appreciate if
20 you would help me to understand -- I have no
21 doubt or I don't disagree at all about the odiferous
22 nature of swine feces.

23 MR. MIDKIFF: Particularly odiferous.

24 MR. BLACKWELL: Particularly, yes. My
25 question, though, is actually I asked you to touch

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1 on two things which I believe were relevant here.
2 So the trend that has been underway for some
3 years is a decrease in the number of farming
4 operations.

5 MR. MIDKIFF: Correct.

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6 MR. BLACKWELL: And my understanding

7 is many youngsters growing up in farming families
8 have expressed little to no interest in continuing
9 that lifestyle and so we have an aging population
10 of farmers and there does not appear to be a
11 sufficient number in the pipeline behind them to
12 maintain those operations. That coupled with a
13 global population, we just passed the 300 million
14 mark, I think where I'm going with this question
15 is, although we have the problems that you have
16 identified with respect to odor, are you suggesting
17 that the solution is to be found in the 1950s sort
18 of --

19 MR. MIDKIFF: More -- more and more
20 people are going to farmers markets, are buying
21 organic sustainable food. That's the fastest
22 growing sector of agriculture, so there are
23 different ways of doing it, better ways of doing it
24 than the industrial methods, so that's part of the
25 answer.

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1 The rest of the answer is it's very difficult
2 for farmers to compete when the U.S. Government
3 subsidizes Premium Standard Farms, Tyson, Moark
4 and so forth, so I'm a farm boy who left the farm.
5 I did it because I didn't like getting up at four in
6 the morning to milk the damn cows, so I did leave
7 the farm but for a totally different reason.

8 MR. CARLIN: If I'm understanding you
9 correctly, although I suppose if you could wave a
10 magic wand you would like everything organic, all
11 small farms, but if I'm hearing you correctly, you
12 accept the fact that realistically there's going to
13 be some large ones?

14 MR. MIDKIFF: That's correct.

15 MR. CARLIN: Okay. So the focus is from
16 your point of view the concern we should deal with
17 is the smell.

18 MR. MIDKIFF: The smell. If you take
19 care of the smell, sooner or later, I didn't mention
20 this, but every stream in McDonald County is on
21 the water list because it's been subjected to 30
22 years of poultry litter, so there are many, many
23 problems.

24 The first, as I said, loudest and longest
25 complaint is about odor and I think if that's taken

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1 care of I would suspect that longtime rural
2 residents would overlook some of the other
3 problems.

4 There will be a continuing demand for

5 cheap food produced in quantity. At the same
6 time, there is more and more people who are
7 wanting quality foods produced in smaller
8 quantities, but I think that inevitably corporate
9 agri-business will continue.

10 MR. CARLIN: Thank you very much.

11 MR. MIDKIFF: Thank you.

12 MR. CARLIN: Dwayne Miller, Missouri
13 Stream Teams.

14 MR. MILLER: Yes. I was told I could
15 bring these to you. Hi, I'm Dwayne Miller and I
16 represent numerous Stream Teams in southwest
17 Missouri and a lot of concerned citizens in the
18 area of the large corporate farms and the impact
19 itÆs had on our environment.

20 Growth in the CAFO industry according to
21 the Missouri Department of Conservation from
22 1982 to 1998 has increased 4,400 percent. That's
23 an exponential growth beyond belief for many
24 industries. Continued growth right now in the
25 state of Missouri is unchecked because animal

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1 unit farms less than a thousand animal units get a
2 permit -- or they do not get permitted. They just
3 are allowed to start up.

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4 It's known that as of 2004 there were 160
5 million poultry in the Elk River and the Spring
6 River watersheds of Southwest Missouri and they
7 created 400,000 tons of manure to be placed on
8 the land or has to be deposited somewhere. This
9 number of poultry used at least 4.8 billion gallons
10 of water, the majority of that coming from the
11 aquifer in the Southwest Missouri area.

12 An ongoing study by the Tri-State Water
13 Coalition points to that the aquifer will be
14 depleted by 2025, possibly sooner depending on
15 how much is being withdrawn. These are best
16 guess estimates because the state of Missouri does
17 not really regulate withdraw and monitor how
18 much is withdrawn from their aquifer. They
19 pointedly said we're a riparian state and you're
20 allowed to do just about whatever you want to and
21 so much for any neighboring state and their use of
22 the underground aquifer system.

23 If this aquifer is depleted, we're looking
24 at not only -- we've heard about a corn problem or
25 a feed problem, we're also talking about a water

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1 problem. This industry is going to collapse or

2 implode upon itself because of their demand
3 placed upon a certain area and its ability to
4 perform and service this industry. It's not
5 regulated by the DNR, as I said, except for the
6 very major largest -- the most large CAFO's.

7 The state of Missouri regulates
8 approximately 400 CAFO's. Newton County Health
9 Department has identified 174 exist in one county
10 and that's all sizes, whether it's an AFO, CAFO,
11 any kind of thing. It's still something that does
12 create a source of nutriment problem and water
13 withdrawal.

14 The USGS has repeatedly stated that they
15 cannot give a good estimate on this water
16 withdrawal for these agencies. Anything over
17 100,000 gallons a day is to be reported to the
18 USGS or the DNR, but it's all strictly on a
19 voluntary basis and is not done for the most part.
20 They are the first ones to admit that.

21 Direct application of this manure,
22 400,000 tons of it and the increase in the cattle
23 production, and this is strictly the 400,000 tons
24 comes from the poultry industry and the cattle
25 production has caused all the waters to be

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1 eutrophic. The EPA lists the .1 part per million of
2 phosphorous in the water in some testing that has
3 been done. It's routine for this to be exceeded
4 three to five to ten times as stated by Oklahoma.
5 It's causing algae problems, which will degrade the
6 water making an odor problem or a taste problem
7 for any commercial -- or I should say municipal
8 users.

9 The heave application of manure has been
10 shown to cause infiltration of some of the
11 nutriments into the groundwater because of the
12 carst geology that exists in this area. Carst
13 geology is a fractured limestone type structure
14 that has numerous voids and fractures in it.
15 Anything applied to the surface if it doesn't run
16 off into the creeks, it will probably infiltrate and
17 goes rapidly down into the upper aquifer. There is
18 an impermeable layer, but it's at four to 500 feet.
19 So people using wells down to two to 300 feet are
20 seeing increased nutriments in their well and fecal
21 contamination.

22 A study funded by the EPA and the Shoal
23 Creek Watershed, the upper Shoal Creek Watershed
24 in Barry County, shows that fecal foreign levels
25 average 5,000 colonies per 100 milliliters over a

1 seven year study. This report details that 87
2 percent of these bacteria were attributed to cattle
3 and poultry.

4 A study completed in Newton County this
5 last summer revealed that six major streams of
6 that county exceeded the level of E. coli
7 considered safe for whole body contact at 70
8 percent of the time during the recreational season.
9 So essentially the county is off limit for safe use
10 of the streams.

11 If you're familiar with this area, it's
12 gravel bottom. It's clear water. I spent a lot of
13 time in Kansas and I've had some students from
14 Emporia State University come over to my place
15 and they just didn't understand how come you
16 could see the bottom at eight feet of water. As a
17 student at Emporia State University, I also was
18 witness to one of the largest fish kills in the world
19 because of Iowa beef producers. That's not a
20 pretty sight when you see that and Mr. Carlin is
21 probably quite aware of that. And, of course,
22 because of that the beef industry has moved out to
23 western Kansas where it probably causes a
24 problem but a much lesser one.

25 As a result of the study we did in Newton

1 County for the Newton County Health Department,
2 four of the six major streams in the county have
3 been proposed for the 303D listing impaired for
4 bacterial contamination. TMDL, of course, will
5 have to be arrived at before they can be removed,
6 but I believe right now that the chances of them
7 being removed is very slight because TMDL will not
8 correct the litter application. During heavy
9 rainfall, the litter application, of course, will run
10 off and then the resulting bacteria contamination
11 levels is zooming skyward.

12 Some estimates of CAFO's, like I said, are
13 four to 500. We have a lot of it and I can say
14 probably we expect that they have over 2,000 of
15 these industries in Missouri unregulated. A 2004
16 report by the Missouri Department of Natural
17 Resource states that 50 percent of the surface
18 miles of river and 30 percent of the surface acres
19 of lakes are not supported for beneficial use. This
20 is unacceptable from anybody's standpoint.

21 I feel that these numbers are probably low
22 because they ignore some of the testing. Newton
23 County was never tested so obviously we have a lot
24 of miles in Newton County that were not on this

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1 I realize our culture -- our production is
2 important, but at what cost to our health and
3 citizens and the environment. I kind of equate
4 some of the rise in poultry production in this area
5 is we were typically a heavily forested area down
6 in Southwest Missouri. The chip mill industry
7 came in, bought land, clear-cut it, took all the
8 trees off of it, therefore, the watershed now is
9 being lost. We have these bare acres so what
10 better thing to do then plant grass and we put
11 cattle on them.

12 Now all of a sudden, this is kind of like
13 an army coming in and cutting the trees.
14 Reconstruction came in during the Civil War and
15 said, hey, we can take care of this. We'll put some
16 cattle on here and you'll be able to raise cattle.
17 Now the carpetbaggers came in, pardon me, but the
18 poultry industry said we have little to enhance
19 your fields of grass and it's not working. There's
20 way too much coming down the pipe.

21 The Newton County Health Department
22 will be posting the six streams in the county as
23 hazardous and not supported for recreation.
24 Legislation backed by the Corporate Farming and
25 Farm Bureau in the state of Missouri was to

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1 prevent county health departments from regulating
2 this industry, a very blatant misuse of their power
3 to use the state legislature to override things.
4 And there is evidence, I've heard, they haven't
5 mentioned it, but there is evidence that litter is
6 moved from Arkansas to Missouri without oversight
7 by the DNR.

8 And lastly, I'd like to say we are talking
9 about food production for the United States, but
10 what amount of this poultry production is leading
11 the country along with our crops and our water.
12 Thank you.

13 MR. CARLIN: Thank you. Mike?

14 MR. BLACKWELL: Thank you for your
15 presentation. My question is regarding the wells.

16 MR. MILLER: Yes.

17 MR. BLACKWELL: You mentioned
18 contaminated wells.

19 MR. MILLER: Pardon me?

20 MR. BLACKWELL: Contamination.

21 MR. MILLER: Yes.

22 MR. BLACKWELL: You're speaking of

23 bacterial contamination?
24 MR. MILLER: Yes.
25 MR. BLACKWELL: And my question has

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1 to do with what the county and state health
2 departments are doing about that. I thought I
3 heard you say nobody is doing anything and I
4 just --

5 MR. MILLER: They aren't. It's just like
6 -- some of that contamination can be probably
7 attributed to bad septic systems, et cetera. Some
8 of them can be attributed to surface
9 contamination. 33 percent of the wells in Newton
10 County have been found

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6 contamination can be probably
7 attributed to bad septic systems, et cetera. Some
8 of them can be attributed to surface
9 contamination. 33 percent of the wells in Newton
10 County have been found contaminated with fecal
11 coliform or E. coli.

12 The process to identify some of these
13 bacterium is a very lengthy -- you have to get a
14 DNA workup and the present cost, MUL workup,
15 they can identify the DNA in water from E. coli and
16 trace it back to the source, but it's \$12,000 for
17 each test, for each animal. In other words, if you
18 want cattle DNA identified, \$12,000 and will test it
19 for you and if you want poultry, they have to do
20 200 replicates at \$60 a sample. So wells, the
21 shallow wells, are the ones getting contaminated
22 and they're also going dry because of the draw
23 down.

24 MR. CARLIN: Mary?

25 MS. WILSON: What two or three

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1 measures do you think would be the most effective
2 and where would you start?

3 MR. MILLER: Probably a moratorium. I
4 don't think we need any more right there. I think
5 we need to sit back. The state of Kansas has done
6 that, a moratorium, no new wells, and that's one
7 aspect of it, a moratorium on any more poultry
8 producers, a better look at their processes, a very
9 strict control of litter placement and removal.
10 Everybody has to be accounted for.

11 I mean, the producer, the way it stands
12 right now in the state of Missouri if you produce
13 litter, once it leaves your property, you're not
14 responsible. It's whoever took it, but we don't
15 know who took it. And they may say, okay, we sold

16 it to so-and-so. Well, then he'll give it to
17 somebody else and maybe turn it over to somebody
18 else.

19 There is -- I mean, it's a tremendous
20 effort has to be placed because his stuff is being
21 spread over hundreds of thousands of acres and
22 nobody can be there when they're spreading it, so
23 you don't know how close they're getting to the
24 streams, you don't know if they're over applying it.
25 And suggestions are by the DNR that it's being

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1 over applied just to get rid of it because it is a
2 problem. It stacks up.

3 That's about it, just water reuse,
4 instigate things and make mandatory monitoring of
5 how much water they're using. The whole state
6 needs to do this. The state of Missouri needs to
7 come into compliance with a good neighbor policy
8 and that is basically as we all know what that's
9 going to -- how much you're going to get
10 accomplished on that.

11 It's also been suggested to dam up all
12 water in the state of Missouri to make sure that we
13 have enough. Don't let it cross the state line.

14 MR. CARLIN: That could create some
15 interest.

16 MR. MILLER: That could.

17 MR. CARLIN: Other questions? Thank
18 you, sir, very much.

19 MR. MILLER: Thank you. I appreciate it.

20 MR. CARLIN: Dr. Keck?

21 MR. KECK: I want to thank the
22 commission for allowing me to speak today and
23 offer my comments and I'm going to start out
24 giving you a little bit of background about myself.
25 I think it is important that you understand maybe

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1 some of my background so you'll have this --
2 understand that vantage point that I speak from.
3 Could I have the next slide, please?

4 I grew up on a farm in Arkansas and I
5 raise chickens for a living. I've got a doctrine in
6 veterinary medicine from Louisiana State
7 University. I did some post doc work in pathology.
8 I've been a lab director, a technical services
9 director for an integrator and a consultant. And I
10 was at a meeting one time and somebody
11 introduced me to a group and they said he needs
12 no introduction. I've always said I need the most
13 introduction I can get because when you work as a

14 consultant there's no guarantee there, so
15 somebody may always hear something and need a
16 consultant.

17 But I've worked with a lot of different
18 groups, integrators, private farmers, organic and
19 natural producers, and I've done quite a bit of
20 work overseas with education and development.
21 And I'm going to talk about animal welfare today
22 related to poultry, but I'll probably broaden this
23 topic just a little bit because in this global
24 economy I think there are a lot of other issues that
25 also extend outside U.S. boundaries.

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1 What I've been doing recently -- I'm going
2 to inject the disclaimer in here. These comments
3 are my comments as 20 years as a poultry --
4 working in the industry as a poultry producer and
5 as a consultant, so I'm working in Congressman
6 Vic Snyder's office as a congressional fellow.
7 There's a national -- selected from this national
8 search to spend some time on Capitol Hill learning
9 how to interface science and public policy, and so
10 that's currently what I'm doing, but the comments
11 are mine and certainly not Congressman Snyder's.

12 Just a couple pictures in here I'll come
13 back to. These are actual photographs that I took
14 with some of my work, but I'll come back to try to
15 relate while I inject them into this presentation.
16 I've raised my hand a few times and taken an oath
17 and one of those was when I graduated from
18 veterinary school and I said I would do these
19 things to benefit society and relieve animal
20 suffering, conserve resources, promote public
21 knowledge and advance medical knowledge. And I
22 think those are very honorable things and I was
23 happy to do that.

24 And I think veterinarians -- next slide,
25 please. I think veterinarians are uniquely

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1 qualified to talk about and to evaluate welfare.
2 They have training in anatomy and physiology and
3 also recognizing signs of pain management and
4 how to deal with that, so I think comments from
5 the veterinary profession and the group is very
6 relevant to that discussion.

7 Now, I have paraphrased this somewhat,
8 but this information has been referred to as the
9 freedoms, but I think what we're saying, because I
10 try to select words carefully when I do one of these
11 presentations because I think the feeling or the

12 image or the information that it conveys can be
13 very important. And sometimes we think about
14 that as being more of a constitutional or a legal
15 term.

16 I think when we read through that we're
17 saying that animals should be without certain
18 things or they should have certain things. And
19 I've listed them there and you can read those for
20 yourself, but they're without -- that pole is right
21 in the middle of that, so I hope the audience can
22 see it better than I can, but that they should not
23 have unreasonable discomfort, that nutritional
24 needs should be met, not painful, to paraphrase,
25 and certain that normal behaviors can be exhibited

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1 and so on.

2 The next one, please. And another way,
3 and several people have written on this topic, and
4 I'm paraphrasing, but I think we can say the right
5 breeding, the right nutrition, the right
6 environment, and when you say right, I think what
7 we're saying is that we need these things to be
8 suitable or that these conditions be met in a
9 suitable fashion.

10 Now, what I've seen in my career is that
11 there has been this transition from this paradigm
12 or model, if you will, that if we are having
13 favorable production, however we measure that,
14 whether it's egg production or whether it's meat
15 production in broilers, or we could even extend
16 that to other species or health production, that
17 basically we're doing a pretty good job. And I
18 think there's -- I think that there is credible
19 evidence that says that is the case, but we are
20 starting and I think the industry and producers
21 have started to look further in saying that we can
22 do a better job of assessing this on a more
23 individual basis.

24 What I've seen -- could you stay on that a
25 minute? I have seen accepted by producers and

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1 management in that and seen a lot of information
2 and been a part of some of these developing
3 informational materials training and operating
4 manuals. And now you see that, we've heard
5 reference to the contract producers, but we see
6 that those -- that information is there and it's
7 used in materials that are produced by the
8 integrators in the case of contract growers. And
9 then we see a lot of information about

10 investigating new methods and research and that
11 needs to continue and research into
12 unconsciousness and how to produce that.

13 Can you go to that photograph, please?
14 This is a photograph that I took in Africa. I spent
15 some time with the Peace Corps in Africa. And,
16 you know, sometimes our viewpoint can be fairly
17 narrow. And we hear something, we say food and
18 security. It's almost a euphemism because when
19 you're hungry you don't -- certainly don't feel very
20 secure, but, in fact, I have traveled in a lot of
21 these places and I have seen that we can -- that
22 there are areas in places where there is not
23 enough protein in the diet. And simply having
24 that piece of meat or an egg in the diet a week for
25 a child can mean a difference in their health.

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1 And so one of the things I would caution
2 against -- go ahead, please, is that we -- and
3 you'll see this again at the end, but we do not
4 need to create a situation or an unintended
5 consequence trying to solve a problem with good
6 guidelines and research and science and certainly
7 creating another one or a worse situation.

8 What I think we need is that we do need
9 to improve and we can improve our training and
10 education and it needs to be audience appropriate
11 and it needs to be a language of multi-lingual in a
12 lot of cases. We need more research into pain and
13 stress and how we measure that. Now,
14 physiologically we can look at cortisol levels and
15 we have good ways to assess some of these things,
16 but we could certainly improve on what that
17 means, behavioral studies included.

18 And I do think these guidelines need to be
19 science based. Simply an emotional agenda -- I
20 see a lot of this. Being in DC, we see celebrity
21 agendas. Now, certainly they can have things to
22 say, but often times they're not experts, they're
23 not trained in science and they're not credible as
24 far as speaking to some of these issues at times.

25 So in summary here, I would say that

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1 animal agriculture does produce wholesome low
2 cost dietary protein. I think producers -- we have
3 to look at principle in these programs. We have
4 had some -- I have seen that situation where it
5 wasn't cost effective and didn't get considered,
6 maybe didn't get done, but I do believe that we are
7 seeing that knowledge shift, that we can look at

8 the principle of it. If it's the right thing to do, we
9 have to figure out how to do it and how to do it
10 correctly. And I do think we have to put a lot of
11 thought in that. We have to broaden our scope,
12 our perspective on it sometimes. And that goes
13 back to my comment about we don't want to cause
14 a bigger situation globally by trying to solve
15 something especially if it's not based on good
16 information. That's it. I'll be glad to take a
17 couple questions.

18 MR. CARLIN: Alan?

19 MR. GOLDBERG: Thank you. I'm not
20 going to tell you what I agree with on the things
21 that you've said. That would waste time, but I
22 would like to sort of focus on two of the issues.
23 One is on the pain and distress issue, about
24 controlling that. We have the technology now to
25 actually produce an animal that would feel no

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1 pain. We could do knockouts that would feel no
2 pain. Is that an acceptable approach to
3 decreasing pain and distress?

4 MR. KECK: Well, I don't think it's a
5 short term or a practical approach at the moment.

6 MR. GOLDBERG: We could do that. I
7 mean, genetically we could knock out the pain
8 system so that an animal does not feel pain. We
9 have that and humans are an example of that. In
10 India those people that never felt pain, so is that a
11 possible approach?

12 MR. KECK: I think it needs to be one of
13 those things that we look at and research. You
14 know, to say that we could do that tomorrow or
15 next year or the year after that, I don't consider it
16 a practical thing. We have spent generations with
17 livestock breeding and developing certain things
18 and they can't all be incorporated in one short
19 period of time.

20 If that could be done, you know, I think it
21 would be a very good thing, but to say that it's
22 practical and apply it, we're a long ways from
23 being able to do that in animal agriculture,
24 probably in human medicine and, you know, I've
25 stretched that further than I should. But, you

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1 know, it would be a good thing there, too. We
2 wouldn't need aesthetics for surgery.

3 MR. GOLDBERG: And the second
4 question is really a personal opinion. Do you look,
5 since you talked about poultry, at the chicken that

6 is in a house that is clean and neat and has food
7 and water and tends to meet most of the five
8 freedoms the same as you look at a companion dog,
9 as an animal?

10 MR. KECK: Generally so, I think.

11 MR. CARLIN: Bernard?

12 MR. ROLLIN: Would you agree that
13 questions about animal welfare as provided by
14 humans are in part ethical questions?

15 MR. KECK: I think they are on part
16 ethical questions.

17 MR. ROLLIN: So they can't just be
18 answered by science, right?

19 MR. KECK: Not entirely, but I think that
20 needs to be the cornerstone or the basis that we
21 rely on.

22 MR. ROLLIN: But we also need an
23 articulated ethic, right, for animal treatment?

24 MR. KECK: Quite possibly.

25 MR. ROLLIN: Okay. That's all.

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1 MR. CARLIN: Dan?

2 MR. JACKSON: You showed a slide of
3 chickens that had access to the outdoors. What
4 was this implying? Was this a preference over
5 housed chickens or what was the meaning of that?

6 MR. KECK: It was a photograph to show
7 you that I've had a pretty wide background and
8 looked at a lot of different farms. I took that
9 photograph myself. I think I was told that some, if
10 not all of you, went to contract farms yesterday. I
11 figured you'd seen that firsthand, you didn't need
12 another picture of that.

13 You know, I'm not advocating that one or
14 the other is particularly better. I mean, I could
15 tell you that in the UK or some of these areas
16 where I've also dealt with avian influenza we had
17 to put those birds inside because it's more of a
18 threat for spreading an avian influenza which
19 could then turn into a pandemic problem, you
20 know, in some people's estimate. So that was
21 simply to tell you that I have put my feet on the
22 ground in a lot of places outside the U.S. in a lot
23 of different kinds of poultry operations.

24 MR. CARLIN: Fred?

25 MR. KIRSCHENMANN: It strikes me in

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1 looking at the principles that you've set forward
2 that they're basically principles of good animal
3 husbandry. Am I correct about that?

4 MR. KECK: I would agree with that, yes.

5 MR. KIRSCHENMANN: Yeah. So my
6 question is what specific recommendation would
7 you have for the commission to move those
8 principles forward, if indeed, those are part of the
9 solution to the problems?

10 MR. KECK: Well, one of the things I
11 mentioned in that presentation that I think there
12 is a need for is education, and I think there's a
13 need for education for all of us but particularly all
14 the way down to the farm level. And I feel like
15 that could be improved and certainly that
16 information can be incorporated as a part of that
17 training.

18 MR. CARLIN: Michael?

19 MR. BLACKWELL: Dr. Keck, I want to
20 first congratulate you on your selection as a
21 congressional fellow. That's a big deal for a
22 veterinarian. I'm happy for you.

23 My question has to do with embedded in
24 our oath, of course, is the promise to promote
25 public health and throughout these meetings we

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1 continue to hear questions or points made about
2 inadequate veterinary medical presence, the lack
3 of adequate veterinarians or the lack of authority
4 over use of animal cruelty or just a number of
5 factors that point to inadequate veterinary
6 presence. Could you just share your thoughts
7 about that?

8 MR. KECK: Well, I'm going to speak
9 mostly -- I'm going to speak entirely about the
10 poultry industry because that's really where I've
11 spent most of my career. I did practice and
12 certainly had colleagues and associates in some
13 other areas, but in the poultry industry I'm going
14 to say it's better than most. It may not be entirely
15 adequate in all situations, but I think it's very
16 good.

17 The oversights there -- you asked two or
18 three questions, I think, within that. The question
19 about perhaps substances or residues, I think that
20 is very low risk quite personally. There's a
21 tremendous amount of testing that goes into that.
22 There's -- you know, we have agencies, USDA, FDA,
23 that have put a great deal of effort over years of
24 time and research into harmful effects of that. I
25 personally think it's very minimal and not just an

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1 opinion, but there's risk assessments that would

2 indicate that, too.

3 I think to your question about veterinary
4 oversight with animal welfare within the poultry
5 industry, it's good. It could be improved, as I
6 said.

7 With the question to antibiotics, that's a
8 large topic. Is there good oversight and usage and
9 am I concerned about residues in poultry meat,
10 hardly ever.

11 The question about the resistance in
12 public health is a whole other topic and I have
13 some information, opinions, and I think some
14 knowledge about that, but that's a different topic
15 than what I tried to address here today.

16 MR. BLACKWELL: Let me just ask --

17 MR. KECK: And again, I will say this. I
18 think that's manageable. I'm sorry, go ahead.

19 MR. BLACKWELL: One of the questions
20 that we continue to face has to do with the
21 availability of antibiotics to lay people and also
22 the practice of using these antibiotics at
23 subtherapeutic or nontherapeutic levels and I was
24 just wondering if you had an opinion about that?

25 MR. KECK: Well, we've seen that usage

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1 decrease. Somebody said 30 percent. Did I hear
2 that by one of the earlier presenters that it has
3 gone from virtually 90 percent to 30 percent? I've
4 seen evidence that it has gone down, the
5 subtherapeutic use, if we want to say that, you
6 know, use for other purposes.

7 For treating a flock or a group of animals
8 or animals that are sick, I think that's done very
9 judiciously and very carefully. Have we made
10 mistakes in the past? Yes, we have. I think we
11 have possibly used those without good enough
12 information and oversight in cases. I think it's
13 dramatically improved. I'm sure we can go and
14 find examples where that may occur. I'm not going
15 to deny that and say everything is great, that I
16 think it's headed the right way. I think there may
17 be some more guidelines that need to come forward
18 on the actual usage of it to make sure they are
19 used correctly.

20 I'm pretty proud of my record, but then
21 somebody may find that there's been, you know, a
22 mishap yesterday, I don't know, but I try to be
23 very careful with that. I use nontherapeutic
24 antibiotics with one or two exceptions.

25 MR. CARLIN: Thank you very much.

1 MR. KECK: Thank you.

2 MR. CARLIN: Dr. Pilkington.

3 AUDIENCE: He's not here yet, I don't
4 think.

5 MR. CARLIN: Okay. Do you know if he's
6 coming?

7 AUDIENCE: Yes. He ought to be here
8 shortly.

9 MR. CARLIN: Okay. Do we have a Dr.
10 Lusby?

11 MR. LUSBY: That's me. My name is
12 Keith Lusby. I'm the head of the animal science
13 department and I have a cold today. I apologize
14 for that. A little background. I am a native of
15 southwest Arkansas and I was around here when
16 the poultry industry did move in and I'm a
17 graduate of your fine land grant college in Kansas.

18 MR. CARLIN: We'll take special note of
19 that.

20 MR. LUSBY: I appreciate that. I thought
21 you would. That's why I mentioned it. The animal
22 science department here covers everything from
23 poultry -- I think you talked to Dr. Bottje
24 yesterday, the head of our poultry science
25 department. What I want to talk about even

1 though you're here to talk principally about the
2 poultry industry is the cattle industry and really
3 what I'm going to talk about would, I think, be
4 relevant to generally the area from east Texas all
5 the way to the Atlantic coast.

6 You saw some maps where the poultry
7 industry is located and I think what you probably
8 already understand is that there's a strong
9 relationship where the cattle industry in the
10 southeast is located and where the poultry
11 industry is located.

12 Now, just a little bit of background on
13 what the cattle industry is in Arkansas in the
14 southeast. It's pretty much an industry of cow
15 and grass. If you look at what we have, we have
16 about two million cattle in Arkansas, about a
17 million of those are cows. They're on 27,000
18 farms, so it's pretty much a small herd industry.
19 We average about 37 cows per farm and actually if
20 you look at the cattle industry across the U.S.,
21 that's very typical. A few large ranches get a lot
22 of publicity, but by and large, it's a small farm
23 business.

24 We pretty much raise two kinds of cattle

25 that we sell in Arkansas. The calves that we wean

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1 off these cows at about 550 pounds and we a lot of
2 times take these cattle past the stocker stage, 750
3 pounds, and then they all go to the feedlot. If we
4 look at what's happening with the corn prices, I
5 think it's fair to likely we're going to raise more
6 cattle in Arkansas and take them to even larger
7 weight and that's going to become more important.

8 You've already seen a map of where the
9 poultry industry is located in Arkansas. If you
10 notice those hatched areas, that's where the
11 largest concentration of cattle are. And if your
12 memory is good where the poultry industry is,
13 they're the same counties and for the same reason.

14 I talked to the Department of Agriculture
15 of Natural Resources last week and according to
16 their estimates we apply litter to the 773,000
17 acres in Arkansas, about 4,000 farms. And
18 actually if you look at that picture, that's not far
19 atypical of what a lot of the cattle industry and
20 poultry industry in Arkansas looks like, pastures
21 surrounding chicken houses, averaging about a
22 little over three chicken houses per farm.

23 Okay. Do a little math on that, the
24 average stocking rates and we calculated it about
25 350,000 cows in Arkansas graze littered fertilized

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1 pasture. So where is the synergy between these
2 two industries? Some of this has already been
3 discussed.

4 Well, with poultry, because of the
5 fertilizer, you have a lot more cattle, and like I
6 say, from my perspective I saw the poultry
7 industry move into Nevada County down around
8 Hope, which is Hempstead County, but everybody
9 knows where Hope is and not where Prescott is
10 where I grew up. But when that industry moved
11 in, I was about ten years old.

12 I remember when my father got the first
13 load of poultry from our neighbors, poultry litter,
14 and, you know, not really being trained in animal
15 science or agronomy I could still understand very
16 quickly what that was doing, you know, for our
17 farm is that very poor soil that had been farmed in
18 cotton and misused for a lot years all of a sudden
19 turned into very good pasture.

20 Litter is an excellent soil amendment, as
21 you well know. It replaces man-made fertilizer. It
22 is a -- matter of fact, in most cattle operations in

23 Arkansas, I think if we had to buy man-made
24 fertilizer today we probably would not do it
25 because of the cost. It's good enough fertilizer

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1 that if you look at pastures that are fertilized with
2 poultry litter, if there's enough forage there, if it's
3 harvested at the right maturity, there's literally
4 nothing required to add to that other than
5 selenium in a few select areas.

6 With the cattle, the litter has value. We
7 brought up what the income is from those poultry
8 houses and if you did some arithmetic you'd
9 probably thought, you know, that's not a whole lot
10 of money, but if you make that about equal in
11 value to the poultry litter as a fertilizer and look
12 at the income off cattle, all of a sudden that's
13 made both of those industries viable across the
14 southeast.

15 Now, the other thing is that this is
16 primarily a secondary income to most families. I
17 think if you look at most of the folks raising
18 chickens and cattle in Arkansas that's not the only
19 thing they do. Someone works off the farm, but
20 this is a large enough business on the farm to
21 allow someone to stay on the farm making income
22 without having to take a job in town and allows
23 them to stay on the farm.

24 If you look at the age of our producers,
25 it's been pointed out that they are an aging

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1 population. Poultry and particularly cattle are a
2 large source of retirement income in the southeast
3 because a lot of these folks have never had large
4 401(k) programs. They don't have anything other
5 than social security and, you know, the income for
6 40, 50 or 100 cows doesn't look like much, but
7 when you figure what the alternatives are, it
8 becomes very significant to them. It lets people
9 live on the farm and it is essential to our rural
10 economy.

11 If you talk to the bankers, their big fear
12 if we ever lose the poultry industry, we'll lose the
13 cattle business and we'll lose the equity in the
14 farms and these local economies will be severely
15 damaged. If you look at the picture here, the
16 fellow on the left is the father of the young man on
17 the right. The guy in the middle is the county
18 agent. They're a classic example. There's a large
19 enough industry or business between these folks'
20 chicken business and cattle business that it's

21 allowed that young man to stay on the farm and
22 manage the livestock and poultry operation. If it
23 weren't for that, then he would be in Little Rock or
24 Fayetteville or somewhere doing something else
25 and what else would we do in that area in north

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1 Arkansas.

2 The question is, is it sustainable? We've
3 had about 50 years of experience in Arkansas with
4 these two businesses running together. We've
5 learned a lot. It's been pointed out the technology
6 has changed, the soil has changed. It's come from
7 when it was so poor that any kind of fertilizer was
8 beneficial to in some cases we don't want any more
9 phosphorus on it, but I think we're getting much
10 better at being able to estimate it to be able to
11 understand what our situation is and design
12 management plans.

13 And I'd point out also that if we look at --
14 I think even Washington and Benton County up
15 here are good examples, but if you'll look at the
16 impact on watersheds that the poultry and the
17 cattle business are only one part. We have
18 375,000 people in these two counties which is a
19 lot more than we had 10, 15, 20 years ago, look at
20 the impact on the construction business,
21 municipal influence, how much nitrogen comes out
22 of Home Depot that goes on the lawns and the
23 chemicals. There are a lot more things impacting
24 the watershed around here than just the poultry
25 and livestock.

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1 Now, it's always a question of when do
2 you apply it, where do you apply it and how much.
3 I think that's the key to anything whether it's a
4 drug, a fertilizer or a food. Okay. The keys to
5 sustainability, we have to maximize the value of
6 that litter, protect the environment. I think in the
7 case of the industry it's been pointed out that not
8 only do we have to protect it, but we have to be
9 able to prove to a lot of people that we are
10 protecting it because there are a lot of people
11 looking at what we're doing in this industry and
12 we have to be able to document with good science
13 what the real impact is. We have to have good
14 relations with our neighbors.

15 We have poultry farms at the University of
16 Arkansas. We have swine farms and we pay a great
17 deal of attention to what days we apply any kind of
18 a effluent because what used to be a rural area

19 about ten miles west of here is now some very nice
20 \$355,000 homes around there and they did not
21 move out there to smell some of the odors that you
22 heard about. So we have to manage that.

23 I've told our swine professor that if he
24 wants to win the Nobel Prize that he will figure out
25 a way to make swine manure not smell. And it

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1 probably is, you know, one of the major priorities
2 that we have in the livestock industry today is, are
3 those things that impact relations with our
4 neighbors who are very different folks than they
5 used to be.

6 So the other thing I would point out is
7 it's interesting how things change. The impact of
8 ethanol was brought up. I've read that in Iowa
9 and places like that now the swine may be a more
10 beneficial business in some cases because they
11 need the phosphorus to put on the corn, all the
12 acres that they're going to have to do to raise corn
13 to make the ethanol. The impact on us in
14 Arkansas is we're going to produce a lot more
15 cattle off of grass because now it's much more
16 economical or it's much more valuable to produce
17 it on grass because of the increased cost of the
18 feedlot. All these things change.

19 So with that, I appreciate the chance to
20 visit with you and I'll try to answer any questions
21 you might have.

22 MR. CARLIN: Take us through a little bit
23 in understanding in terms of, I mean, the chicken
24 industry has grown over this period of time
25 obviously producing more chicken litter.

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1 MR. LUSBY: Yes.

2 MR. CARLIN: The need for that typical
3 land, does the need for that chicken litter go down
4 once you've kind of suddenly got that soil shaped
5 up and producing and you've got great grass or
6 does it need about the same or even more?

7 MR. LUSBY: Long-term it's going to need
8 the same because long-term you're going to need to
9 fertilize with the amount that grows the grass and
10 does not increase those nutrients beyond the
11 amount that really you need to grow the forage, so
12 you can tolerate putting more in in early years
13 because you can build up phosphorus if the soil
14 had essentially none in it, but at some point it has
15 to equilibrate with what you're going to move off
16 that land in terms of either hay or cattle.

17 MR. CARLIN: Now, you talked about the
18 typical farmer was 37 cows and that would be
19 three chicken houses?

20 MR. LUSBY: A typical farm is 37 cows.
21 Probably the guy with three chicken houses I
22 would say maybe has closer to 100 cows or 150
23 cows, but he may -- if he doesn't own those, he's
24 going to sell that litter to neighbors who have
25 more, so the ratio of cows to chicken houses will

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1 be more than -- I guess it would be about 37 cows
2 to a chicken house, though.

3 MR. CARLIN: Okay. Okay. But in terms
4 of acres, a typical farmer with one house, 37 cows,
5 et cetera, has to get rid of some of their litter
6 somewhere else?

7 MR. LUSBY: Eventually, yes, sir.

8 MR. CARLIN: When you say eventually --

9 MR. LUSBY: Well, I think we've reached
10 eventually in a lot of counties. In some places we
11 haven't, but when those levels of phosphorus,
12 nitrogen and those things build up to a point that
13 you're building up past a certain level, then you've
14 got to find another place to put it. And I think if
15 you look at the level you can put out, yeah, they're
16 going to have to spread that to other areas. At
17 some point maybe you can do that when you're in
18 close proximity of the farm. This has been brought
19 out in other cases. We may have to put it on a
20 truck and ship it to Oklahoma or down in the areas
21 where they use it for crops. It just depends on
22 where you are geographically and time wise.

23 MR. CARLIN: Your pictures are very
24 inviting to me in terms of soil conservation. You
25 see that grass and I compare that with the abused

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1 soil and the run-off that can take place. Are you
2 saying that we could almost go to any farm and
3 that's what we would see or is that sort of
4 atypical?

5 MR. LUSBY: No. I think really if you
6 drive around Arkansas and you look at farms that
7 -- and their saying is that everybody who has
8 cattle doesn't have chickens, most everybody that
9 has chicken has cattle. I dare say that 90 percent
10 or more would look much like those pictures I
11 showed you.

12 MR. CARLIN: John?

13 MR. HATCH: Yeah. I'm wondering if you
14 saw grass fed cattle as a -- perhaps marketing that

15 as a superior product?

16 MR. LUSBY: I don't -- the question is, is
17 marketing grass fed cattle a superior product, I
18 assume you mean from feedlot cattle today?

19 MR. HATCH: In terms of money.

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20 MR. LUSBY: I think nutritionally, I don't
21 really think there's much difference, but if in the
22 perception of people that they like that product,
23 they deem it's healthy, then it's a product that we
24 would try to teach people how to produce. I think
25 the reason we're going to produce more pounds in

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1 Arkansas is simply because the economics now
2 favor that compared to the feedlot because of the
3 high price of corn.

4 MR. CARLIN: Fred?

5 MR. KIRSCHENMANN: I think you may
6 have answered part of my question. I was having
7 -- I mean, I've been very concerned, as I gather
8 you are, about the next generation and other
9 people, the next generation of farmers. You know,
10 nationally now only six percent of our farmers are
11 under age 35 and so we need to do something
12 about that, so I was really intrigued by your
13 comment that this system was enabling next
14 generation of farmers to come in and I was trying
15 to figure out -- because we had heard earlier that
16 net profit from chicken houses is about \$9,000 and
17 then you add 37 cows, that doesn't really add up
18 to the kind of income that enables the next
19 generation to come in and then I gather you're
20 saying that 37 cows aren't adequate and it's not
21 all of these farms that are --

22 MR. LUSBY: I think if you take the three,
23 three and a half chickens and you've got 100 or
24 150 cows, then you have the chance to have -- I
25 mean, not the kind of income that's going to allow

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1 you to put your kids through college, but it's
2 enough to allow someone to stay on the farm and
3 with another income usually in town teaching
4 school or working at the bank then all of a sudden
5 that becomes a viable income to, you know, to put
6 your kids through college and take vacations and
7 these things and build some equity to pass to
8 other generations on the farm.

9 MR. KIRSCHENMANN: So the statistic
10 that I'm missing here is that it might be more
11 helpful what the mean number of cows are on the

12 farm so that we have a better idea of how many
13 farms are actually enabling the next generation to
14 stay on?

15 MR. LUSBY: I can't give you that off the
16 top of my head. I really can't, but I would say it's
17 probably more like the picture of the two
18 gentlemen I showed which is probably six chicken
19 houses and 250 or 300 cows. This business is
20 growing in somewhat of a scale, I mean, for the
21 reasons that others are, but that's one that does
22 give you a pretty good chance to make a decent
23 income and grow equity.

24 MR. KIRSCHENMANN: Okay. That helps,
25 thank you.

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1 MR. CARLIN: Were you here earlier when
2 we had our friend from the UK?

3 MR. LUSBY: Yes, sir.

4 MR. CARLIN: Any reaction or comment?

5 MR. LUSBY: I think it would be a grand
6 thing if we could generate electrical power from
7 manure -- I mean, from poultry litter and swine
8 litter in places where we have too much of it where
9 it's economically viable. To me, that's a grand
10 thing. That solves our problem. It doesn't create
11 one in my mind.

12 MR. CARLIN: On the swine manure issue,
13 can you give us any encouragement as to whether
14 you see real progress coming in terms of how to
15 deal with that volume as well as the smell?

16 MR. LUSBY: I think to me where that fits
17 better is probably in states like Iowa where those
18 are built around farming country where you grow
19 corn, you grow other crops and you have a high
20 phosphorus requirement and you can till that right
21 into the ground. That helps solve the odor issue
22 right away and those crops are much more
23 conducive to using swine litter or even poultry
24 litter than grass is because they require more
25 phosphorus. And again, you can incorporate that

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1 directly into the ground because you're farming it.
2 It's probably going to be more problematic in areas
3 where we, you know, would have to rely totally on
4 pasture systems as a way to utilize it.

5 MR. CARLIN: Bernie?

6 MR. ROLLIN: How do you envision the
7 future of Arkansas' agriculture economy if the
8 price of grain soars? It sounds like the entire
9 system is built on that little fulcrum.

10 MR. LUSBY: Well, not really. If you look
11 at that map of Arkansas in the Delta, they grow a
12 lot of cotton, they grow a lot of rice, about a
13 million acres of wheat and nobody knows how
14 much corn we can grow. I think we're about to
15 find out, so in those areas I think they're going to
16 deal with this very well. The cattle industry,
17 again, I think we'll grow more pounds of cattle on
18 grass and get more gain from that way before they
19 go to the feed yard. With poultry and swine it will
20 be yet to be determined. They don't have any way
21 yet to really offset those impacts. Ultimately,
22 we'll produce enough less to generate enough price
23 to make it feasible for those in the business to
24 stay in the business.

25 MR. ROLLIN: Thank you.

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1 MR. CARLIN: Alan?

2 MR. GOLDBERG: Our charge is to sort of
3 look at the impact of concentrated animal farming
4 on public health and the environment, rural
5 communities, animal welfare. The kind of
6 presentation that we're beginning to hear is saying
7 that the poultry industry has no problems, our
8 waste is taken care of, not only is it taken care of,
9 it has a useful output. We're creating another
10 industry, the cattle industry. We're feeding people
11 exceptionally cheaply with a high-quality protein.
12 What are the problems?

13 MR. LUSBY: Well, I think largely what
14 you said, you know, is the case. I think the
15 problems we have to deal with are we have a lot
16 more people in this country every year taking up
17 more land. We're going to have to do this on less
18 land. We're going to have to share the water
19 resources a lot more with those folks. Every one
20 of them that comes up here wants to build around
21 Beaver Lake, and so there's going to be a lot more
22 people watching us and we're going to have to do a
23 much better job.

24 We're going to have to minimize the
25 impact that we have on the environment, but I

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1 think the demand is still going to be there to
2 produce in this case the beef and pork and poultry
3 at a price that most everybody can afford. They
4 are demanding that we pay more attention to how
5 we take care of these animals. They are
6 demanding a greater voice in what we put into
7 them and you see in all these industries, you

8 know, the cattle, multi source age verification,
9 they're demanding and they have a right to know
10 how these animals are raised and what we put into
11 them, so the management is going to be just that
12 much more important.

13 MR. CARLIN: Earlier we had a couple
14 presenters in terms of the environment as it
15 relates to water quality and so forth. Do you have
16 any comment in regard to that, or suggestions?

17 MR. LUSBY: Well, I think, again, I talked
18 to friends that I work with that, you know, work in
19 the water quality area, which is one of the reasons
20 I put up the slide that said there are a lot of other
21 things that impact these -- impact water other
22 than just poultry and livestock. But it's going to
23 be incumbent on us to demonstrate what the
24 effects are and to come up with better systems,
25 how we can raise cattle better, to have better

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1 buffer zones, and that's why the university just
2 started -- you may have seen the sign that says
3 watershed research and education center, which is
4 going to be built right in town, so we can not only
5 do research there but educate the urban dwellers,
6 as well.

7 There are a lot of things, you can find
8 streams, spring fed streams, right around here
9 that have moss in them all summer and the only
10 thing they drained is a subdivision. It might be a
11 little parochial, you know, the department of
12 animal science, for example, but, you know, the
13 cattle industry, the poultry industry need to be
14 able to point out that we're not the only ones
15 doing some things and we need to be good
16 stewards, but we're going to have to make the
17 other folks do it, too. And that may mean that
18 someone goes down to Lowe's, maybe needs a soil
19 test and it tells them how much fertilizer, how
20 much ammonia nitrate that they can put on their
21 front yard.

22 If they've got grubs, can they go put
23 anything they want in there to kill those grubs?
24 Well, that water, it's going down here in Beaver
25 Lake and, you know, that's where this came from

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1 and I would kind of be interested in that because I
2 drink it, too.

3 MR. CARLIN: Where did we get this?

4 MR. LUSBY: Hot Springs, I think.

5 MR. CARLIN: An earlier speaker made

6 reference to the state of Missouri not exactly
7 managing their water resources very well. How do
8 you feel about the state of Arkansas?

9 MR. LUSBY: I think the water resources
10 here are managed very well. I think you've got the
11 head of the Arkansas Natural Resources
12 Commission, I think, is due to speak here. And
13 again, I think you look at 50 years of history here,
14 I mean, there's certainly some things we can do
15 better and things we know to do better, but I think
16 Arkansas has been one of the leaders in developing
17 best management practices for the application of
18 poultry litter, you know, Regulation 5 for
19 application of swine waste. You know, I think if
20 you look at the way things are handled in
21 Arkansas, we've been more in front than we have
22 playing follow the leader.

23 MR. CARLIN: We had a gentleman from
24 Oklahoma earlier say that something was coming
25 out of Arkansas that wasn't as good as he had

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1 hoped it would be, so we've got a little bit left to
2 work on.

3 MR. LUSBY: Yes sir.

4 MR. CARLIN: Thank you very much.

5 MR. LUSBY: Thank you.

6 MR. CARLIN: My understanding is Dr.
7 Pilkington has arrived. Very good. If you'd be so
8 kind as to come forward. Do we have -- oh, and
9 we've got a slideshow, too.

10 MR. PILKINGTON: We do.

11 MR. CARLIN: And you are chief
12 veterinarian.

13 MR. PILKINGTON: I'm vice president for
14 live production services for Tyson Foods and, yes,
15 I am a veterinarian. Our group encompasses the
16 veterinarians, nutritionists and some technical
17 specialists in hatcheries and females strictly for
18 the chicken side of Tyson's business.

19 What I was asked to give you an overview
20 of today is avian influenza. My understanding is
21 -- the format is I have about ten minutes to speak
22 and about ten minutes to field questions. With
23 that in mind, I only brought six slides, one of
24 which is a title slide and two of which are the
25 exact same, so I think I can get it done.

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1 MR. CARLIN: Good.

2 MR. PILKINGTON: I'm going to have to
3 work around the pole here.

4 MR. CARLIN: You're not the first one.

5 MR. PILKINGTON: My first slide, this
6 slide and the very last one are the exact same and
7 that's because if you distill avian influenza down
8 everything we've heard of in the last probably
9 mainly two years, but quite frankly this particular
10 virus has been going on longer than that, can
11 really come down to just a few key points. The
12 ones I want you to take away are listed here.

13 First of all, we classify the particular
14 avian influenza we're worried about, we read about
15 in the papers as H5N1. The details about how we
16 classify that are longer than ten minutes, but
17 H5N1 highly pathogenic avian influenza is an
18 animal disease and currently there is not a human
19 pandemic anywhere in the world.

20 It's very important that we keep these two
21 diseases separate. There is one bucket for the
22 animal disease, thus the term avian influenza, and
23 then over here there's the fear of human pandemic
24 which is a completely separate entity. Now, of
25 course, the worry is that the avian influenza

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1 bucket increases the risks of this one occurring,
2 but the two are not directly related. And I'll touch
3 on that a little more as we go through this
4 presentation.

5 Secondly, as I said, I am from Tyson so a
6 lot of these slides refer to Tyson but I'll also speak
7 for the industry. All the Tyson's flocks and about
8 97 percent of the industries' are currently tested
9 prior to a crew going out and picking them up.

10 And then the third bullet point, you've
11 seen on some web sites, National Chicken Counsel
12 web site and a couple of other prominent ones, the
13 statement that consumers have virtually no chance
14 of encountering poultry meat, and that would be
15 encompassing chicken and turkeys, with avian
16 influenza in it.

17 All of that being said, the fourth point is
18 probably the most important. Normal cooking
19 defined by what you do today or heating this up to
20 165°F kills any flu virus that would happen to be
21 in that product. Okay. I don't know who is
22 driving this, but if you'll advance it.

23 The reason I'm standing here today is
24 really this slide. We would not be discussing this
25 at this level if the avian influenza virus, the H5N1

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1 highly pathogenic virus, had never made the jump

2 to infect a person. This is a real busy slide. You
3 guys I've provided a copy, so you can certainly get
4 this and study it later, but this comes from the
5 WHO and it is a table detailing all the countries
6 where human cases have been identified by WHO
7 standards.

8 And if you look to the far right and down
9 to the bottom, the case number, if I'm reading it
10 right, is 270. That's as of February. The
11 mortality rate of those cases is over 160, so that
12 comes out to be about 60 percent. That's a big
13 deal and that's why we talk about it because this
14 virus has managed to move from a bird to people.
15 It has done so only when the infected people have
16 been in very close contact with those birds,
17 whether that be cohabitating or even slaughtering
18 and consuming of those birds. But that's the
19 reason we're here and we talk about it today.

20 If you'll move to the next slide, please.
21 We have never had an outbreak of this virus, this
22 H5N1 highly pathogenic AI, not only in the United
23 States, we haven't had it in North America. I will
24 even go on to say we have not had it reported in
25 North America, Central America or South America.

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1 But certainly the industry I'm associated with and
2 most knowledgeable about, being the U.S.
3 industry, it's never been here. It's not here now.
4 That's very important to remember. This virus is
5 half a world away. That should give us some
6 comfort. I'm not saying we should ignore it, but it
7 should give us some comfort.

8 Also realize this virus has been known for
9 over ten years now. Again, that should give us
10 some comfort. What are we doing, and this does
11 say what is Tyson doing, to protect its flocks? It
12 holds true for the industry at large, but
13 biosecurity is our main weapon against any
14 disease coming into and proliferating our flocks.
15 It certainly applies for avian influenza and
16 certainly we've stepped up biosecurity in light of
17 recent events.

18 The biggest difference in the U.S.
19 industry and the raising standards in poultry in
20 the areas of the world where this virus first
21 proliferated, mainly Southeast Asia, is -- and I
22 think a fair amount of you had a chance to tour
23 some farms yesterday. First of all, our farms are a
24 long ways away from where most people live. Now,
25 I've done this in all of these talks and I know I've

1 got a few folks that work in poultry time -- every
2 day, so excluding someone that works for an
3 integrator, who has been, and those of you who
4 visited the farm yesterday, who has been on a
5 poultry farm in the last month?

6 Susan works for the university in poultry,
7 too. I'm getting stumped. That's the first time --
8 and I've got one more. I've got four people out of
9 this room. I will tell you the most I've ever had
10 raise their hand, and I've given a lot of these
11 talks, that's the most. Up until now I've had two
12 people. That would not be the case if I was giving
13 this talk in the areas of the world where this
14 disease proliferated. People would not only say
15 I've been on a farm, they would say I own
16 chickens. In fact, there are some cases where it
17 would be a rare day for you not to encounter yard
18 birds, backyard birds, et cetera. Simply put, the
19 U.S. is not situated -- it does not look the same as
20 these parts of the world.

21 We put our birds on farms that are far
22 removed from our population centers, then we put
23 barriers around those whether they literally be
24 fences or simply large amounts of land. We then
25 put the birds in houses that are enclosed,

1 separated from wild animals and birds and so
2 forth. So that's the biggest, biggest difference.

3 We also, both Tyson and the industry,
4 monitor continuously for a lot of diseases, but
5 we're out monitoring for avian influenza, as I said,
6 in all of our flocks before picking up to go to
7 processing and also in our long live birds, our
8 breeder birds, on a regular basis.

9 If you'll flip to the next slide. And I told
10 you you'll see this slide again. These are the four
11 points I want you to remember. The first is avian
12 influenza is an animal disease. It is not -- there
13 is not a human pandemic.

14 Secondly, all the industry, it says 97
15 percent of the industry, essentially all of the
16 industry tests prior to picking up for slaughter.

17 Thirdly, the chances of anyone in this
18 room encountering avian influenza through poultry
19 meat is remote. And thirdly, even if it was there,
20 as long as it is cooked, again, normal, nothing
21 special, not high temperatures, just 165, which is
22 what everyone has heard from the beginning of
23 food safety talks, 165 would kill it even if it were
24 to be there. I believe that's my last slide and I

25 think I just ran out of my time.

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1 MR. CARLIN: Well, first of all, we want
2 to say that thanks to you we're all going to sleep
3 better tonight. We can at least feel comfortable
4 that we won't wake up tomorrow to a pandemic.

5 Mary?

6 MS. WILSON: You mentioned that all of
7 your flocks are tested prior to processing. How
8 many per flock, how soon or how late prior to
9 processing and how is it done, is it serologically,
10 by isolation, can you give us a bit more
11 information about that?

12 MR. PILKINGTON: Yes. All of our flocks
13 are tested, but you raise a good point, which is
14 what is a sample size within a flock? And that was
15 a point -- the number is 11 birds.

16 MS. WILSON: 11 birds --

17 MR. PILKINGTON: 11 birds out of a
18 flock.

19 MS. WILSON: Per 5,000?

20 MR. PILKINGTON: That's right. And I
21 see your eyebrows raising for good reason, except
22 let me back up and say that number was arrived at
23 beginning, I may have my dates a little bit off, but
24 beginning probably three years ago the National
25 Poultry Improvement Plan, which is a cooperative

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1 plan with USDA, some university experts and so
2 forth starting to debate exactly that, how should
3 we monitor for this disease long before it hit the
4 front page of the USA Today. And they arrived at
5 11 being significant. The reason it's significant is
6 avian influenza is a very quickly spreading
7 disease, so if it gets into a flock, it will spread
8 fast enough that they're comfortable with 11.

9 And your second question was what test
10 do we use. That varies through the industry, but
11 what Tyson uses is a serological test and it is what
12 the industry states is within 14 days of slaughter,
13 so it may be closer but it would not be longer than
14 14 days.

15 MR. CARLIN: Michael?

16 MR. BLACKWELL: I apologize, I missed
17 part of your presentation.

18 MR. PILKINGTON: That's all right.

19 MR. BLACKWELL: But I wanted to have
20 you clarify your comments about pandemic
21 influence really are limited to what might happen
22 to your industry, is that correct?

23 MR. PILKINGTON: Specific to what?
24 MR. BLACKWELL: Concern that we as a
25 nation should have been preparing for the

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1 possibility.
2 MR. PILKINGTON: My comments are
3 specific to the poultry industry and I know I am
4 not suggesting that we should prepare for
5 pandemic. However, I will go on to say that the
6 reason I think we should prepare is not because
7 this is the one but because pandemic preparation
8 can be carried over into any type of disaster
9 preparedness whether that be flu, tornado,
10 hurricane, et cetera.

11 MR. BLACKWELL: I have a follow-up
12 question. Unfortunately, I could not visit the
13 facility yesterday, as you probably heard. My wife
14 has a bunch of parrots at my house so we were in
15 violation.

16 MR. PILKINGTON: I'm not allowed to
17 have any myself.

18 MR. BLACKWELL: You want to change
19 places? My question actually has to do with the
20 poultry industry has set a real standard for
21 biosecurity. I think that's pretty well understood
22 and generally recognized and veterinarians like
23 yourself had a lot to do with that.

24 For the person who works at that facility
25 and gets exposed at home and not necessarily to

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1 pandemic influenza in this case but the highly
2 pathogenic AI, what steps do you have in place
3 that would prevent contamination of your product?
4 I mean, you can't possibly test each individual
5 coming in each day, so how is that addressed?

6 MR. PILKINGTON: I think I understand
7 your question to mean how do I protect somewhat
8 like yourself?

9 MR. BLACKWELL: I work in your facility.
10 Last night I encountered the virus. I came in
11 today and I'm coughing all over.

12 MR. PILKINGTON: Well, first of all, I
13 need to point out that all of the things I said prior
14 give me a lot of confidence that that is not
15 occurring and will not occur because of where the
16 virus is because of the fact that the virus has not
17 shown the ability to go from birds to person, back
18 to bird, et cetera. It just hasn't happened.

19 MR. BLACKWELL: But do you know that?
20 Do you have proof of that?

21 MR. PILKINGTON: No. What I'm saying
22 is it has not been shown.
23 MR. BLACKWELL: Okay.
24 MR. PILKINGTON: Okay. We can talk
25 theoretical possibility, but I'm talking about what

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1 has been known today as fact. Also, we do have in
2 place policy that all of our employees that deal
3 with live birds are aware of and agree to that says
4 you do not have parrots, you do not have backyard
5 birds, you are not in contact with those and if you
6 do run into them there is a quarantine period
7 before you come back. And that was put in place
8 for general disease purposes, but it works really
9 well for this, too.

10 MR. CARLIN: Bernie?

11 MR. ROLLIN: There is a hypothesis
12 floating around that the 1917 pandemic was
13 essentially this virus or something close to it. So
14 I guess I didn't understand you when you said we
15 have no evidence that there was ever a pandemic.

16 MR. PILKINGTON: And if I said that, I'll
17 retract that. What I said is there has never been
18 H5N1 highly pathogenic avian influenza in North
19 America. Secondly, there is not a human pandemic
20 in the world today. Now, yes, there have been flu
21 pandemics in the past. I fully recognize that.

22 MR. ROLLIN: Not just the flu pandemic,
23 though, right? You know more about that than I
24 do.

25 MR. BLACKWELL: No, go ahead, please.

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1 MR. ROLLIN: Well, I was going to say
2 that there is a suggestion from DNA evidence that
3 it was precisely this virus.

4 MR. BLACKWELL: It's been
5 reconstructed.

6 MR. PILKINGTON: And I would have to --
7 I would have to defer to seeing that, but what I do
8 know is it has not been diagnosed as avian
9 influenza, this virus in North America.

10 MR. BLACKWELL: What they did was
11 they looked at, what was it corpses, and
12 reconstructed the virus by molecular biological
13 methods.

14 MR. PILKINGTON: Okay. I can't speak
15 to that.

16 MR. BLACKWELL: The largest pandemic
17 the world has ever seen, which was 1918, actually
18 it was this virus.

19 MR. PILKINGTON: Right.
20 MR. BLACKWELL: We now know that.
21 That was determined last fall. It was
22 reconstructed using DNA technology and the
23 movement that's being monitored around the world
24 suggests that it's mutating at a similar way that it
25 probably did in the early part of the twentieth

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1 century. If that does happen, all of us will know
2 it. It's not a Tyson issue. It's an issue for the
3 globe, frankly.

4 MR. PILKINGTON: Certainly, and I can't
5 speculate on the virology between -- among 1918
6 flu. I'm not schooled on that at this time.

7 MR. CARLIN: Tom?

8 MR. HAYES: Thanks for coming today.
9 Two quick things. One, it seemed like when the
10 migrating birds were going to come back from the
11 north pole last year we thought it was pretty much
12 inevitable that we get it.

13 MR. PILKINGTON: Not we all.

14 MR. HAYES: Well, I'm sorry. There was
15 a great body of evidence that people thought that
16 it would probably come back. It doesn't seem to
17 have happened yet. What's your odds, and sort of
18 a quick question on we got a paper today that
19 suggests that backyard flocks are actually less
20 risk than large commercial flocks, have you seen
21 that paper?

22 MR. PILKINGTON: I don't think so. Let
23 me start with the first one. Certainly there was a
24 lot of worry because of migratory fly-aways that
25 were common between the parts of the world that

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1 we've talked about it and, quite frankly, where we
2 are right here and those birds commingling up in
3 Alaska, et cetera, that we needed to monitor those
4 birds. And you're right, nothing was found.

5 You could feel this room and divide it in
6 half and one half would be those that are
7 surprised by that and one half would be those
8 saying I told you so. Which are right, I'm not
9 going to speculate. I don't have odds. I don't
10 have odds on whether it will happen next year, but
11 I do take comfort in a lot of sampling was done. It
12 was not found and the birds are not flying -- are
13 not commingling up there right now. Your second
14 question, I don't know which article you're
15 referring to.

16 MR. HAYES: That's okay. I will send you

17 a copy. It's evidence based policy for controlling
18 high path AI in poultry vials. It's a look at
19 Thailand and the sampling process and the
20 statistical significance of big flocks, which we saw
21 yesterday, versus small backyard flocks and they
22 say that the big flocks are more susceptible than
23 the small flocks are, which seems to be
24 counterintuitive to what you say.

25 MR. PILKINGTON: And I would say,

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1 having the short time to think about it, that is
2 counterintuitive to me especially when you
3 consider two things. One, most of the cases that
4 we've seen in the world have not been in what we
5 would call commercial birds, at least the way we
6 know them. Again, most of those cases.

7 And secondly, when you just look in the
8 United States of other avian influenzas that are
9 found, I'm talking about low path and so forth,
10 more of those are found in noncommercial birds
11 than what you will see in commercial. So you're
12 right, it seems counterintuitive.

13 MR. CARLIN: David?

14 MR. ANDREWS: Well, it appears that
15 you're chasing out fear with a lot of clarity and I
16 wonder whether there's enough warrant for all that
17 clarity. I do appreciate the attempt to deal with
18 overcoming fear. The recent problem in England
19 was the commercial turkey.

20 MR. PILKINGTON: Yes, it was.

21 MR. ANDREWS: And I've been in lots of
22 urban areas, cities like New Orleans and
23 Albuquerque, where I've spent a period of time
24 where there are chicken flocks right outside urban
25 doors, so while maybe a lot of people in this room

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1 haven't been near flocks, a lot of consumers
2 actually all over the country do live in such
3 circumstances and whether the backyard chicken
4 is the problem or the commercial is the problem, I
5 think there's enough evidence to suggest that too
6 much clarity doesn't necessarily help us deal with
7 some of the dimensions of the problem that exist.

8 MR. PILKINGTON: I would respectfully
9 disagree to that. I think there is far more of the
10 hysteria and the, let's say, media driven fear such
11 that there is no amount of clarity that would be
12 too much. And I do recognize there are plenty of
13 cities that have birds in them, I mean, Key West,
14 et cetera, but those populations don't tend to

15 cohabitate with those birds in the manner that
16 most of the areas where these diseases are
17 occurring have actually had outbreaks.

18 MR. CARLIN: Mary, this will be the last
19 question.

20 MS. WILSON: It's actually not a
21 question. I just want to clarify something that
22 was said earlier and that is the virus that caused
23 the 1918, 1919 pandemic, all of the genes -- I
24 mean, they were able to show with the
25 reconstruction that all of the genes did come from

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1 avian species, which was one of the reasons for
2 such consent, but it was actually the H1N1. It
3 was not identical to the virus we have seen today,
4 but it was -- all the genes were from avian species.

5 MR. PILKINGTON: Thank you. Then I'll
6 stand by my earlier statement.

7 MR. CARLIN: Thank you, sir.

8 MR. PILKINGTON: Thank you.

9 MR. CARLIN: We now shift to a list of
10 people who have asked to make a few comments.
11 They weren't scheduled this early. We've made it
12 clear that instead of the ten minutes it's going to
13 be more like five minute statements. I'm not
14 advised clearly as to who is here and who is not,
15 so I'm going to run the list as fast as we can, but
16 obviously give everybody that signed up a chance
17 to speak and for us to ask a few questions.

18 The first name I have is Ken Knies,
19 K-n-i-e-s. Ken, is Ken here? Then we'll come back
20 and give him a chance in case I bungled the name.
21 Michael Anderson? Michael Anderson? Michael
22 Anderson? Mark Adams? Mark, Ozark Clean
23 Water.

24 MR. ADAMS: Ozark Clear Water.

25 MR. CARLIN: Clear Water, excuse me. I

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1 was reading correctly a mistake, but it was not my
2 mistake. It was Bob Martin's back here.

3 MR. ADAMS: Thank you for allowing me
4 to speak before the commission. It saves me a trip
5 to Washington, DC actually. I've been up to our
6 state capitol a number of times speaking. My
7 name is Mark Adams. I live outside of Neosho,
8 Missouri, which is in southwest Missouri, an hour
9 or so north of here.

10 I am a member and, you know, in this
11 meeting a representative of a group of citizens,
12 Ozark Clear Water, and the web site is

13 ozarkclearwater.com. We got together and got
14 together a petition and a core group of citizens in
15 the number of 3,600 citizens in the surrounding
16 area. Our county, Newton County has a population
17 of 50,000 but out of that 3,600 citizens petitioned
18 the core group who opposed an expansion of a
19 local Class 1A CAFO. These are the large factory
20 farms that you've been asking about and talking
21 about. This is a layer facility which is owned by
22 Moark Land O Lakes Productions that was onsite
23 with an existing 1.3 million birds in '05 and
24 applied for an expansion permit just outside of
25 Neosho a mile and a quarter away from a two year

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1 college called Crowder College known nationally
2 for it's solar power and also bringing the solar
3 houses and energy efficient houses to DC.

4 But they applied to the Missouri
5 Department of Natural Resources, which is the
6 Missouri regulatory agency with oversight over the
7 Class 1A CAFO's and probably has the most
8 regulatory oversight over the biggest one of these.
9 And they applied for a permit to expand to 3.9
10 million birds. The company has tried for an
11 expansion permit in both northeast Oklahoma and
12 southeast Kansas and they were both denied both
13 times after citizens became aware and realized
14 what they were going to be receiving in the form of
15 low wage, high turnover jobs. Even though Kansas
16 and Missouri in those areas need jobs, they
17 decided they didn't want the benefits that were
18 brought with them with these facilities, both with
19 the odor and the large amounts of litter that are
20 spread around.

21 In '05 the Missouri DNR did accept the
22 permit application and went through public
23 hearings and at the end of that '06 period, '05
24 period did grant Moark the permit after hearings
25 both in Jeff City between commissions, the

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1 governor, the head of the Missouri Department of
2 Natural Resources, citizens meetings, public
3 meetings. We do have objections and citizens on
4 our side both at the Crowder College and the Board
5 of Directors and one of our state representatives
6 that did object to it, as well.

7 The expansion was such a large number of
8 birds. We're talking about poultry houses that
9 have 200,000 birds per house, eight battery cages
10 high and these are battery cage systems which are

11 the full confinement that we've been talking about
12 that are environmentally controlled.

13 These systems in the European Union by
14 the Layer, I believe it's the European Union Layer
15 Animal Welfare Act, they're looking at phasing
16 these systems out by 2012, I believe. And some
17 countries have, you know, phased them out
18 completely, so it's not a new technology. It's
19 something that Europe has dealt with and is
20 moving away from, at least by reading and
21 understanding of that.

22 In opposing this we found out that there
23 was very little regulation and oversight both at the
24 federal and state level for allowing, you know, a
25 facility this large and this size to expand so close

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1 to both a college and within -- well, actually
2 within a quarter of a mile of the city limits. The
3 company has had problems in the past, both with
4 trying to start up a manure palletizing plant 10,
5 15 years ago. It was shut down because of odor
6 problems and they never developed a market, they
7 said, but the odor problems were so severe that
8 they shut that pallet plant down and that was
9 taking the manure and compressing it.

10 They also now in the process in moving
11 forward with this expansion with five buildings
12 now with a million birds in addition to the 1.3
13 million that they have, and these are egg layers,
14 that they are now having now notice of excess
15 emissions, they have notice of violations issues by
16 the Missouri DNR for odors out in both their
17 compost facility. And I will say that regulations
18 have been minimal.

19 Back in 2005, October, the Federal Trade
20 Commission ruled that the United Egg Producers,
21 and Moark is a charter member, were to stop using
22 by October '06 an animal care certified logo that
23 was filed with a lawsuit by the Better Business
24 Bureau in compassion over killing. It was
25 appealed and it was finally stated by the FTC that

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1 they had to get rid of the logo by October '06.

2 I went to a grocery store in Neosho on my
3 way here and bought a carton that says animal
4 care certified. They are still using that logo in,
5 you know, flagrant, you know, noncompliance, I
6 guess. I don't know that there was any fine for the
7 ruling, but it just -- it tells us the type of
8 oversight, that it is not happening with these

9 companies. Another issue is -- is that it?

10 MR. CARLIN: Well, you can do what I
11 would have done in my past career, when Mary
12 asks the first question, you can answer her and
13 then just kind of elaborate a little bit. Mary?

14 MS. WILSON: I didn't have one, I'm
15 sorry.

16 MR. CARLIN: Well, I'll ask the question.
17 I'm confused. I didn't hear you, so go ahead and
18 continue.

19 MR. ADAMS: Well, just in violations the
20 lack of oversight both by the Federal Trade
21 Commission, I think it was just a compliance
22 recommendation where there was no significant
23 penalties and that's one thing that we found out
24 with the Missouri DNR, both at the state level that
25 they are hesitant to, you know, put any punitive

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1 penalties before and on a company. They want to
2 bring them into compliance. In the course of that,
3 they're not enforcing the regulations and they do
4 have regulations.

5 A week ago I watched a litter truck spread
6 on frozen snow covered ground, and that's against
7 the state regulations doing that, but they do it and
8 there is no, you know, adequate enforcement. Our
9 state DNR, you know, indicates that they don't
10 have the money or the funding or the people to be
11 everywhere all the time and so the companies
12 continue with it.

13 Moark as a company also was charged
14 with animal abuse and cruelty a year and a half
15 ago by the prosecuting attorney for sending live
16 chickens off a conveyor belt, 30,000 into a
17 dumpster smothering and crushing. That was the
18 first time that a corporate entity had been charged
19 with animal abuse and it's only a misdemeanor in
20 the state of Missouri with a \$3,000 maximum fine
21 potential and they knew that they were going to go
22 to court, both the three individuals in the
23 company and the corporate entity charged. It was
24 precedent setting, you know, nationwide that they
25 agreed to pay \$100,000 to the local animal shelter

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1 and the prosecuting attorney dropped the charge.

2 And I will also say that Moark is the third
3 largest egg producer in the country and the largest
4 egg marketer in the country and they are the egg
5 production division of Land O Lakes.

6 MR. CARLIN: Alan?

7 MR. GOLDBERG: Humane Care Certified
8 is not a regulatory certification, it's a voluntary
9 program.

10 MR. ADAMS: United Egg Producers
11 promulgated the rules and regulations and it's
12 basically egg industry people that formed the
13 United Egg Producers and came up with standards
14 for animal care which basically conformed to how
15 they house the animals and 48 or 52 square inches
16 of space and it gave the consumer a false
17 impression that it was animal care and they have
18 been told not to use it, but I just picked up a box
19 and you're welcome to take a look at it.

20 MR. CARLIN: Okay. Go ahead.

21 MR. ADAMS: There's been talk here of
22 complaints of citizens around these facilities and
23 right now there's an ongoing hearing with six
24 citizens, pro se petitioners before the Missouri
25 Administrative Hearing Commission petitioning

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1 this company and their permit. The citizens did
2 not, you know, use an attorney or a retired doctor,
3 veterinarian and other people with cattle and
4 others around this that are petitioning the permit
5 and asking to hold the expansion to the existing
6 number of birds before they prove their "new
7 technology" that they're putting in with the
8 200,000 bird houses, which aren't the largest in
9 the nation.

10 I think the largest now are in Malcom,
11 Iowa, Fremont Farms with houses of 400,000
12 chickens per house, but the issues that the
13 industry brings up and the industry here has
14 expressed a lot of confidence in everything that
15 you're doing, but us as citizens on the ground
16 don't quite have that confidence in the result of
17 what's coming out, the issue of chronic
18 complainers. And there are several state
19 legislators who put forward legislation regarding
20 chronic complainers and I submit that where there
21 are chronic complainers there are chronic
22 violators. It's not a one way street issue. I would
23 also ask, you know, that us, the citizens --

24 MR. CARLIN: I think we need -- in
25 fairness to others that are going to follow, I've

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1 been as kind as I can. I don't want to be abusive
2 and cut you off, but thank you very, very much.

3 Michael Chase, is there a Michael Chase?
4 Jeff Gillespie, Wayne Farms, contract poultry

5 producer.

6 MR. GILLESPIE: Thank you, governor. I
7 appreciate you all having this hearing today. I am
8 a poultry and cattle farmer. I raise broilers for
9 Wayne Farms in Danville, Arkansas which 100
10 miles or so south, southeast of here. I have a
11 bachelor's of science from Arkansas Tech
12 University in Russellville and I used to actually be
13 a broiler field rep for Wayne Farms for four years,
14 so I have a little bit of experience from the
15 company's side as well as production side. I also
16 hope you won't hold it against me I served as a
17 legislator in Arkansas for seven years. So anyway,
18 I'm also on the ARCS. They're the Yell County
19 Conservation District in Yell County currently.

20 I am one of those, I guess some people
21 call it mega farm, is the term that was used. I
22 have 12 broiler houses and with capacity probably
23 260,000 total, something like that. I own about
24 700 acres and I run about 180 cows. I think --
25 and I really was glad I came today because I've

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1 learned a lot and it's been a good continuing
2 education. Poultry producers, I don't think, are
3 required for continuing education, but it's been
4 good for me.

5 MR. CARLIN: We're not handing out
6 credits.

7 MR. GILLESPIE: Anyway, I think that a
8 lot of the issues that I was concerned with have
9 been addressed, one being, obviously, I think we
10 have rounded the corner and are rounding the
11 corner in the use of poultry litter where it's
12 needed and I know that on my farm I started years
13 ago fencing off my lower wetlands, planting trees
14 down there and I've just planted another 100 acres
15 and put in the repairing buffer program, the CRP,
16 the CRP program to maintain water quality and to
17 enhance water quality.

18 I think -- you know, I know in the last few
19 years we have put more emphasis on best
20 management practices and in our county we have a
21 very good water quality technician that helps write
22 plans for producers to helps them more utilize
23 their litter better and their resources better. And
24 I think, you know, a lot of people, I think, try to
25 call the big farms the bad guys and I think really

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1 having a larger farm allows me to do a few things
2 better because I have a little more cash flow and I

3 can do a few things. There are so many little
4 things you have to do that if you've got more
5 volume you can spend more time doing those
6 things and I think that's one help.

7 One thing I wanted to touch -- two more
8 things I wanted to touch base on. One was the
9 fear of regulation. I know that there were
10 regulations proposed that was spoken to earlier
11 that would limit the amount of pollutants coming
12 out of the exhaust out of the house and I think
13 that's very concerning. You know, who sets the
14 limits, how arbitrary are they, and I find it
15 interesting that we're checking the emission there
16 at the house where I don't have anybody living
17 within a quarter of a mile of my chicken houses
18 and most of my houses the effluent is blowing into
19 a pine plantation. And so I think, you know, to be
20 quite fair we ought to go to the nearest town and
21 see if I'm affecting them or the nearest population
22 area.

23 As in any other thing, when you're talking
24 about wastewater treatment plants, you bring the
25 simulation capacity you have depending on where

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1 your -- the amount of water you have there to
2 simulate what your effluent is depends on your
3 requirements for your discharge. And I think
4 that's somewhat similar in poultry. I'm pretty far
5 removed from population and I don't really see why
6 the effluent right out of the back of the chicken
7 house is going to affect somebody two miles down
8 the road.

9 The thing that I think to sum up that we
10 can do, as I said, I think we've rounded the
11 corner. We're making progress in using our litter
12 and our resources better, but one thing we've got
13 to do is continue funding in our area for water
14 quality technicians and we've just had two people
15 in our local NRCS office retire and I think we're
16 going to get one of the two guys replaced and the
17 two guys had all that they could do before.

18 And I think that it really will help --
19 we've got to maintain funding for those water
20 quality technicians and those NRCS people because
21 they have the expertise and have the resources
22 readily available to help out those management
23 plans and make sure that they're carried out and
24 take that load off the farmer or part of that load
25 off the farmer, and I think that's very, very

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1 important. With that, I will entertain any
2 questions.

3 MR. CARLIN: Very good. I want to ask
4 you in regard to your concern about regulation,
5 I've had no practical experience to share your
6 concern, but let's say hypothetically we could be
7 reasonable, which maybe is possible, then how
8 would you feel? In other words, you're not saying
9 there is no problem, you're just concerned that if
10 there's going to be regulation they might not take
11 into consideration that population is far removed
12 from you versus somebody right next door?

13 MR. GILLESPIE: That is correct, and I
14 don't mean to say there's not a problem.

15 MR. CARLIN: That's what I wanted to
16 make sure.

17 MR. GILLESPIE: And I'm sorry I'm not as
18 polished as some of the previous presenters, but
19 one thing I want to come across with, you know,
20 we're using best management practices and I'm
21 going to do those things that I know are out there.
22 You know, the repairing buffer deal is an example.

23 I guess my question is why do we have to
24 measure what's coming out to know what our limit
25 needs to be? And maybe I'm not scientifically

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1 aware enough to figure that out, but we ought to
2 know what the limit is or what's safe before we
3 figure out what's coming out of the pipe. And to
4 me, you don't need me affecting -- you don't need
5 the producer affecting what's right and you don't
6 need people on the other side affecting what's
7 right. We need to know what's right and then try
8 to meet it, whether that be good or bad for me.

9 MR. CARLIN: Michael?

10 MR. BLACKWELL: Thank you for
11 appearing today. Just one question. When you
12 said we've kind of turned the corner, I want you to
13 again explain what that means. And if that's true
14 today, I really would appreciate it if you would tell
15 me about any concerns you might have with the
16 population growth being as high as 1,100 million
17 over the next 15 years or so and what that means
18 compared to today.

19 MR. GILLESPIE: Okay. Well, in
20 rounding the corner I meant being involved in the
21 industry personally since 1992 when I went to
22 work for Wayne Farms, you know, I guess, the
23 further we've gone the more aware we have become
24 of environmental issues. I think that's safe to say
25 and I think that back then there were -- that was

1 right at the beginning of the time in our area when
2 we started writing -- well, most people started
3 getting water quality plans or nutrient
4 management plans.

5 I guess, what I'm saying is that's become
6 more and more important and I think we're finally
7 getting all of those in place and some of them -- I
8 think mine is being rewritten for the third time.
9 However, there are people out there that for
10 whatever reason are probably just getting theirs
11 written for the first time. And I think when we do
12 that and we keep pounding the emphasis for
13 getting those plans and making sure that they're
14 following, that's not going to be a 30 day process
15 for us to figure out what we've done has helped.
16 And I'm not saying we -- I mean, I think we need to
17 do whatever we need to to protect the environment.
18 I think most poultry farmers feel that way.

19 MR. CARLIN: Tom?

20 MR. HAYES: Sometimes poultry
21 producers are kind of characterized as pawns of
22 big companies. Here you're a guy with a four year
23 degree, you worked for the big company and you
24 still chose to go into poultry farming, why?

25 MR. GILLESPIE: Well, I guess --

1 MR. HAYES: It's not a trick question.

2 MR. GILLESPIE: Well, I mean, we talked
3 about it a lot on the way up here. I mean, it's just
4 -- there's been poultry in my area since the '50s.
5 My grandfather had a couple poultry houses that
6 were destroyed by a tornado and it's a good way to
7 make a living in our area. I was talking with your
8 communications guy outside and I was talking
9 about sitting down and going through some of
10 these farm bills and a lot of these fact sheets that
11 have been talked about and I told him I don't have
12 time to sit down, much less sit down and go
13 through that.

14 Well, that's -- you know, I mean, it's a
15 low return, high time investment job, but as I say,
16 it's better than a real job. Mr. Penzo doesn't call
17 me at -- he's the broiler manager that came with
18 me and that's a person whose position I reported
19 to years ago, and if I wasn't there at 7:30, they
20 were looking for me wondering why, and he doesn't
21 call me now at 7:30 in the morning to see if I'm at
22 the chicken house.

23 MR. CARLIN: Very good, and we thank

24 you.

25 MR. GILLESPIE: Thank you.

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1 MR. CARLIN: Do we have an Abel
2 Tomlinson? Nancy Radcliffe? And I want to very
3 quickly ask did a Ken Knies come in or K-n-i-e-s?
4 Michael Anderson? Michael Chase? I'm turning
5 the page. I may come back, I may not. Mary
6 Loughin, factory farming? Susanna Brinnon?
7 Jason Hatfield, Lundy & Davis? Kelly Petty? Peter
8 Boyt?

9 MR. BOYT: You got one. I may go over
10 my five minutes. I'll try not to. I am a resident or
11 an owner of a small family farm in southwest
12 Missouri. I happen to be a veterinarian and I hope
13 that what I can bring here will help solve some of
14 the controversy here or at least give some
15 information into what I have observed where I live.

16 I did a literature search for the economics
17 of CAFO's and I came up with a lot of information.
18 One individually in particular caught my eye and
19 his name is John Ikert and he is an emeritus
20 agricultural economics professor at the University
21 of Missouri Columbia. And some of the
22 information I'm going to give is from him and one
23 of the papers that he has put out. He's a very
24 proliferate writer on CAFO's. He has spent ten
25 years touring CAFO's in 12 different states and in

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1 three Canadian provinces and the information that
2 he has gained is quite extensive and I'll try to
3 condense what he has said regarding economics.
4 And then I want to get into some animal health
5 with avian influenza to maybe put the fear back
6 into you, if you will. But I'll try to go through the
7 economics here real quick first.

8 Regarding family farms, you need a
9 definition for family farms and the best one I could
10 come up with is a farm household that owns and
11 controls the majority of farm production factors
12 including land, labor, technology and management.
13 The proponents of CAFO's state that it's going to
14 be -- when a CAFO comes into a rural community
15 that it's going to be an economic boom for the
16 community and for the agriculture industry.

17 John Ikert takes exception to that and
18 states that in his experience that not a single
19 community where CAFO's represent a significant
20 segment of the local economy is looked upon today
21 as a model of economic success or prosperity.

22 These again are his findings over ten years of
23 experience in his economic experience at the
24 University of Missouri.

25 He also references the sustainability of

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1 CAFO's and that they are not sustainable. They
2 often go to rural communities and they search out
3 those communities that are economically
4 depressed. They say that they're going to bring
5 economic prosperity to these communities and
6 then years later when the resources are depleted
7 and the area is saturated with the waste from
8 these CAFO's they move on and they try to find
9 other rural communities.

10 They use the profits that they gain by the
11 power that they have both in buying power and
12 marketing power over the family farmer. They
13 distribute those profits strictly to shareholders
14 and corporate executives and do not put that
15 money back into the land. They had no ties with
16 the land. They have no reason to put that money
17 back into the land; whereas, the family farmer
18 does.

19 The family farmer takes those profits,
20 sinks it back into the land so that farm can be
21 sustained through generations and can be passed
22 down from father to son to grandson and beyond.

23 The social impacts are -- John Ikert has
24 alluded to the social impacts and ranging from low
25 wage jobs and increased crime as other speakers

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1 have talked about. They decrease the value of the
2 rural communities. There's resource depletion,
3 pollution of the area and people don't want to
4 move into communities where CAFO's are or have
5 been because of those factors. Clean air and clean
6 water and low crime is a lot of the reasons that
7 people seek out rural communities to live and with
8 CAFO's that is not the case.

9 The new farm bill, the 15 million -- in the
10 new farm bill that's being proposed, \$15 million
11 has been allocated for rural development and the
12 CAFO's seem to conflict with that rural
13 development because CAFO's, according to John
14 Ikert, actually degrade the rural development and
15 so the federal money is coming in trying to repair
16 damage done by the CAFO's.

17 My experience with -- this information I
18 can apply to Moark, which Mark Adams had talked
19 of, and all of these things have happened at

20 Moark. They have gone to three different
21 communities trying to build new facilities and to
22 get rid of the older facilities that they've had for
23 10 to 20 years. Those three communities rejected
24 Moark so Moark had to come back to their original
25 site. They had to tear down the old houses, put up

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1 new houses and they have to truck out the manure
2 because the area around them is so saturated with
3 manure they can no longer spread manure in the
4 local area.

5 There is tremendous public opposition to
6 this company expanding and building a new
7 facility. There is an appeal Mark Adams alluded
8 to, the appeal that is in place to try to stop this.
9 Thousands of citizens have come out against this
10 CAFO expanding. And if CAFO's are so good, then
11 why is this community, and this is not a unique
12 community, why is it so opposed to this CAFO
13 rebuilding and expanding. It doesn't make sense.

14 MR. CARLIN: I'm going to need to kind of
15 cut you off there. Anybody want to ask a question
16 in regard to his opinion on we shouldn't sleep well
17 tonight?

18 MR. ANDREWS: Scare me.
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19 MR. BOYT: Thank you. I want to talk
20 about bird flu. Obviously, there are other viruses
21 that cause problems in the poultry industry. The
22 bird flu is at the forefront. There have been in the
23 last -- since 2003 in Southeast Asia, China,
24 Africa, Europe outbreaks of the H5N1 virus.
25 Hundreds of millions of birds have been either

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1 killed or have died from the disease. The majority
2 of these birds, and this conflicts with some of the
3 information you've had before, the majority of this
4 comes from what they call commercial poultry
5 operations.

6 They may not be CAFO's in the true sense
7 of the word here in Arkansas or in Missouri but
8 they are confined units with large numbers of
9 birds and some may be outside, some may be
10 inside. The fact remains that the majority of the
11 birds that died, died in these commercial units,
12 not backyard flocks.

13 We in the United States have had a high
14 path influenza outbreak, several high path avian
15 influenza outbreaks in the past. The most recent
16 in 2004 I believe in Texas. It was relatively -- a

17 relative short duration and it was the H5N2, which
18 is slightly different than the H5N1, still a high
19 path avian influenza.

20 In '83 and '84 had a tremendous outbreak
21 in the eastern United States with high path avian
22 influenza, again, H5N2. 17 million birds were
23 either killed or died from the disease. A lengthy
24 eradication effort costing a great deal of money
25 and these were in CAFO's. These weren't backyard

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1 flocks or the majority. I won't say they weren't
2 all, but the majority were in confined units, so
3 there is a big danger for avian influenza in
4 CAFO's.

5 You don't have to have a lot of birds to
6 come in to cause an infection. One gram of
7 manure infected with avian influenza is enough to
8 infect a million birds. You can have feed trucks
9 going down the highway, somebody that has an
10 avian influenza outbreak on their farm, it gets the
11 manure on the highway then the feed trucks for a
12 CAFO hit that manure and take it right to their
13 facility. Bang, you've got a major problem, major
14 infection.

15 MR. CARLIN: Well, I think you've
16 adequately answered the question. I wasn't giving
17 you an extension to give another speech. Michael,
18 do you have a question?

19 MR. BLACKWELL: I do. I'm curious
20 about your position on getting to the future and
21 feeding a large population in the U.S., U.S. based
22 animal protein. Can you envision such a future
23 without CAFO's?

24 MR. BOYT: I think, yes, I do. And I
25 think it would cause a resurgence in small farms,

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1 family farms and rural development in the United
2 States.

3 MR. BLACKWELL: So how do you make
4 that happen when there's a trend away from, you
5 know, interest in farming?

6 MR. BOYT: The trend is based on profit
7 and CAFO's can operate very efficiently, sometimes
8 with greater efficiency than a family farm because
9 of their buying power and their marketing power.
10 They also -- without regulation of the waste that
11 they produce and the resources that they use, they
12 can out compete the family farmers, but they're
13 not sustainable, and in that fact we may have a
14 low cost protein source, but it's not on a solid

15 foundation and it cannot be sustained. And
16 CAFO's have given us a false foundation for that
17 low cost animal protein.

18 And also the profits, John Ikert alluded to
19 this, the large CAFO's haven't really reduced the
20 cost of the protein supply. What profits they make
21 are between the production and the retail and they
22 can control those markets and they take those
23 profits; whereas, the family farmer cannot control
24 those and they take those profits and they
25 distribute it to their corporate executives and the

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1 shareholders and they really haven't lowered the
2 price of the animal protein.

3 MR. BLACKWELL: So let me make sure I
4 understand. If the level of earnings, what level of
5 living one can make, and that business were to be
6 improved, do you think more people would go into
7 farming like we saw in the past? In other words,
8 you mean profits to the individual family farmer --

9 MR. BOYT: I think if -- I think I
10 understand your question. I think that if CAFO's
11 were to pay the cost on sustainability or, in other
12 words, if they become sustainable, the price of
13 food will go up and in turn the family farmers will
14 make more money and it will increase -- give an
15 incentive for more people to move to the farms and
16 to produce that protein supply.

17 MR. CARLIN: Thank you very much.

18 MR. BOYT: Can I add one thing, one
19 thing, please?

20 MR. CARLIN: Very short.

21 MR. BOYT: Okay. One of the speakers
22 said that if you cook the meat or the eggs or
23 whatever to 165°, no avian influenza. Okay.
24 That's a false sense of security because the
25 protein that comes and the people that produce it,

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1 the slaughter houses that process it, the people
2 who collect the eggs and the processors that
3 package it send it to the market. That's all raw,
4 never been cooked, any avian influenza is still
5 there. The homemaker who takes the chicken out
6 of the bag, raw chicken, avian influenza is still
7 there and can infect people if the jump is made
8 between avian influenza bird flu and human
9 influenza. We've got the big, big problems and I
10 wouldn't sleep well at night knowing that.

11 MR. CARLIN: Thank you. What a great
12 way to end.

13 MR. BOYT: I'm sorry.
14 MR. CARLIN: I've been passed a note
15 that a Dr. Walter Bottje would like to make a short
16 statement. We dealt with you a little bit
17 yesterday. You're a pretty decent bus driver.
18 MR. BOTTJE: I didn't drive.
19 MR. CARLIN: You weren't driving
20 yesterday?
21 MR. BOTTJE: No.
22 MR. CARLIN: I thought that was you that
23 was driving.
24 MR. BOTTJE: I was going to answer your
25 question. I attended a conference. It was critical

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1 dialogues on avian influenza and Michael
2 Osterholm, who is director of CDC, unequivocally
3 stated that the threat of any H5N1 getting into the
4 United States is not in the commercial industry.
5 It is in backyard flocks that are associated with
6 wild birds.

7 Secondly, I had a conversation with Mike
8 Roebuck, who is vice president Cargill, and he
9 indicated in their operations in Thailand in which
10 they were on biosecure systems like we saw
11 yesterday, those operations didn't get AI; whereas,
12 it was in the backyard birds. Once again, I just
13 wanted to clarify that.

14 MR. CARLIN: Quick question. You have
15 opened yourself up. I can understand what you're
16 sharing. Let's use a hypothetical where the flu
17 gets into those birds running around. That
18 doesn't mean unless you have really good
19 biosecurity it can't move into a CAFO flock. I
20 mean, it would be possible, theoretically possible.

21 MR. BOTTJE: Theoretically.

22 MR. CARLIN: Yeah. I'm not suggesting
23 -- I mean, I understand your point that the way
24 you house them in a CAFO and all the practice you
25 go through it's going to be the birds running

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1 around that are going to get the dropping from the
2 sky from somebody going by, but theoretically at
3 least it could go from there through a family
4 through a worker where the, you know, we talked
5 about earlier where somebody said, well, if they
6 come in contact then they can't work or they've got
7 so much time.

8 MR. BOTTJE: That's right.

9 MR. CARLIN: But theoretically maybe
10 they're not honest with you. It's possible is all

11 I'm asking?
12 MR. BOTTJE: It is possible.
13 MR. CARLIN: And therefore, it is
14 reasonable at least to look at ways we would deal
15 with it if that happened.
16 MR. BOTTJE: Which the industry has in
17 place as soon as there's anything --
18 MR. CARLIN: I understand, but, I mean,
19 you wouldn't do that unless there was a
20 possibility?
21 MR. BOTTJE: Yeah, that's true. And the
22 commercial birds that have been destroyed in the
23 past, they did get AI in their flocks but they
24 responded. The mistakes that were made in
25 Virginia in the last low pathogenic avian influenza

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1 case are not going to be repeated because they
2 learned from those.
3 The big mistake was there wasn't
4 conversation between the state and local
5 government and the companies and so they were
6 going to destroy these flocks and they said, no,
7 you can't bury them on-site, we've got to take
8 them to a landfill. And they were running up and
9 down the roads with those, so those mistakes. The
10 NPIP that was mentioned, we've got one of the
11 strongest ones in this state. They're going to
12 respond to this and I'm absolutely confident that
13 it's not going to spread.
14 MR. CARLIN: But it's important that
15 those practices be there and you can't just
16 assume.
17 MR. BOTTJE: Well, that's right.
18 MR. CARLIN: You know, we do have a
19 pretty good track record of repeating our mistakes.
20 MR. BOTTJE: Okay.
21 MR. CARLIN: I mean, I'm not disagreeing
22 with you. I'm just saying it's important that we be
23 aware of the possibility and what needs to be
24 done. If it's in place, that we keep -- you know,
25 the gentleman earlier that said that they're losing

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1 one -- you know, two water folks are retiring. It
2 makes a difference as to whether that program is
3 going to go forward in an appropriate way, so we
4 constantly have to have follow through, compliance
5 and et cetera.
6 MR. BOTTJE: Sure.
7 MR. CARLIN: Thank you very much.
8 Fred, I apologize.

9 MR. KIRSCHENMANN: No, that's okay. I
10 just -- I think that there's kind of an assumption
11 here which I think both from the point of view of
12 biology and from the point of view of actual
13 experience that can't be substantiated very well
14 and that is that we can somehow control the flow
15 of microorganisms in pollen, et cetera, and there's
16 not a lot of evidence that we've been terribly
17 successful at that.

18 MR. CARLIN: Okay. That point will go
19 into the record, as well. Do we have a May Belle
20 Osborne?

21 MS. OSBORNE: Yes, you do.

22 MR. CARLIN: May Belle, are you teaming
23 up against us today?

24 MS. OSBORNE: I'm carrying her water.

25 MR. CARLIN: Carrying her water.

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1 MS. OSBORNE: Yeah. He's not going to
2 talk. I get to talk. I'm just going to read what I
3 have written down and that way I think I can keep
4 up with this guy and his pieces of paper.

5 MR. CARLIN: We'll find out. You go.

6 MS. OSBORNE: Okay. I represent We The
7 People. I'm here to talk to you all about the good,
8 the bad and the ugly. I have seen both sides of
9 the egg business in my family. My name is May
10 Belle Osborne. Tomorrow is my birthday. I was
11 my mother's Valentine gift. I was born in
12 Carthage, Missouri. My daddy got us from our
13 farm to the hospital despite the snowstorm or so
14 the story goes, so you see I grew up on a small
15 family farm and these things we are talking about
16 are corporate food production factories and they're
17 strangling the life out of the small family farmers.

18 It has become a moral issue and a matter
19 of life and death. By polluting the air, water and
20 land these animal factories are killing off tourism
21 in the Ozarks, small towns are dying and Neosho
22 where a Class 1A CAFO owned by Moark Land O
23 Lakes is expanding has Neosho's Crowder College
24 next door.

25 You have most likely noticed my hands by

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1 now. 33 years ago I was diagnosed -- well, I
2 diagnosed myself with rheumatoid arthritis, one of
3 over 100 kinds of arthritis. I just happened to
4 have the most systemic and deforming kind. I'm
5 also now 15 years out from breast cancer. I am a
6 survivor.

7 I have learned everything I can and used
8 the best that science has created along with
9 common sense and constant research. I believe it
10 is important to get an education about what life
11 throws your way and anything as you stumble
12 across. Quality of life is important to me, so my
13 food, air and water quality matter.

14 Let me begin with the ugly. There needs
15 to be a moratorium on CAFO's in Missouri. The
16 mixing of corporate money and politics is
17 particularly ugly. It creates greed, disregard for
18 citizens, mother earth, God's creation and
19 animals. State entities like the Missouri
20 Department of Natural Resources have become
21 nothing more than an economic development
22 agency. For years the southwest Missouri area
23 DNR serviceman acted as a prolific stenographer of
24 Moark violations.

25 Moark's Neosho Crowder College area

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1 Class 1A CAFO is currently permitted to expand
2 from 1.3 million to 3.9 million laying hens. I have
3 the short version of violations that he wrote up
4 and the Missouri DNR did little about. These
5 became the cause of my involvement. I was
6 shocked and I was saddened by what I read.

7 I have a listing of some of the
8 contributions made by my family and Moark Land
9 O Lakes officials to our elected officials preceding
10 the expansion of Moark Land O Lakes. The
11 transnational corporation Land O Lakes now owns
12 Moark, the bad, or so it turned out to be.

13 After returning from Korea and using his
14 GI Bill, my brother, Hollis Osborne, who is 12
15 years older than I, developed Moark Productions
16 which today is number one in egg marketing,
17 number three in egg production in the United
18 States.

19 He has been extremely successful as a
20 businessman using what he has described as good
21 Christian business principles. I don't know
22 exactly when he lost respect and caring for the
23 citizen neighbors and the land around him. He did
24 not even treat the employees humanely, let alone
25 the cage tent that are nothing more than egg

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1 factories.

2 As Europe is in the process of phasing out
3 these massive battery cage egg factories, the U.S.
4 builds them and holds dominion over the animals

5 imprisoning them to produce food. Our people
6 need to be educated about what happens to their
7 food before they pick it up at the drive-through
8 window. There needs to be more education about
9 eating a more sustainable diet.

10 As the climate changes, maybe it's time to
11 think about the old movie called Feeding His
12 People. I'll end, I can't leave out -- you can't
13 make me leave out the good. My other brother,
14 Jack Osborne --

15 MR. CARLIN: Good, because I was
16 starting to worry about family gatherings.

17 MS. OSBORNE: We don't have any. He is
18 eight years older than I and also in the egg
19 business. An entrepreneur, he created a cage free
20 egg business and asked his daughter, my niece, if
21 she was interested in running the business and
22 she turned it into a \$6 million a year business.
23 This is in Colorado. She is featured as one of the
24 millionaires on the cover of Millionaire Blueprints
25 Magazine in the 2007 January-February issue, so

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1 it is possible to be successful by using exacting
2 standards of humane treatment, no cages, no
3 hormones or antibiotics and a purely vegetarian
4 diet like the life of a regular barnyard chicken. I
5 only left out a little bit. I'm sorry.

6 MR. CARLIN: I'm glad you got the good
7 brother. I don't know what we're going to do about
8 the bad one, but anyway, you present a very
9 interesting message and we might have one or two
10 more, but it's kind of a nice little wrap-up in
11 terms of realistically laying out that it isn't like
12 everything is bad. It can be good and we can be
13 responsible. Yes, John.

14 MR. HATCH: I would like to know how
15 can you have the good production and make
16 money?

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17 MS. OSBORNE: My niece, she has
18 developed the business from the ground up, you
19 know, and she started out small by going to, you
20 know, one grocery store at a time and getting them
21 interested in the product and she found out that
22 people want it and I think that's what the big
23 issue is. People want their food to be safe. They
24 want it to be grown and, you know, the animals to
25 be raised in a humane and a good way.

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1 I had a pet chicken. I mean, Big Bertha

2 was -- she was a pet. And so I know that, you
3 know, if you treat them right, they produce well.
4 And in her entire article she has about how, you
5 know, how many eggs they lay and it's possible.

6 MR. HATCH: People pay more for the
7 eggs.

8 MS. OSBORNE: People pay more for the
9 eggs and they want them.

10 MR. CARLIN: Tom?

11 MR. HAYES: I think you win. You have
12 the most unique perspective we've heard from, I
13 think. It's really great you came. How many
14 chickens does your good brother's daughter have?

15 MS. OSBORNE: Look in there and tell
16 me. He's the number person.

17 MR. CARLIN: I thought you just carried
18 your water.

19 MR. OSBORNE: It's a six or \$7 million a
20 year gross and I would expect somewhere in the
21 range of two to three million birds.

22 MS. OSBORNE: So you see if there were
23 bunches of people doing that as opposed to this
24 humongous CAFO where they're all crammed in
25 there together, I guess you guys must have gone

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1 out and looked at those, or you know what they
2 look like.

3 MR. HAYES: I was just trying to figure
4 out, I mean, there is a huge range of CAFO's and
5 probably you're bringing up exactly the point.
6 Some people consider, you know, several million
7 birds -- I don't know how big the larger facility is,
8 but you could probably envision that as a CAFO
9 also, right?

10 MR. OSBORNE: Their houses are 10 or
11 15,000 birds per house. They're floor houses.
12 They're individually owned and she puts the names
13 of her growers on the web site and they partner
14 with her in supplying her the eggs, so they are
15 small floor houses diversely spent over a large
16 area so they don't have the concentrated amount of
17 manure. It comes out of the -- you know, a house
18 of 200,000 birds on a complex with 13 houses that
19 size.

20 MS. OSBORNE: She calls them the girls
21 and there's a picture of the girls waiting to get
22 into a laying nest.

23 MR. OSBORNE: A copy -- several copies
24 were submitted.

25 MR. CARLIN: I always thought Big

1 Bertha was a driver.

2 MS. OSBORNE: Well, I guess if you are a
3 golf person.

4 MR. CARLIN: Do we have a picture of
5 who said that? Fred, get me out of this.

6 MR. KIRSCHENMANN: Well, I don't know
7 if anybody can get you out of that. I just wanted
8 to also express my appreciation particularly
9 because I think a lot of times we get caught up in
10 the notion that there's only one option and the
11 message that you brought to us is there are other
12 options and that farmers don't necessarily be
13 locked into it. I'm not making judgments here one
14 way or the other about small operations versus
15 large ones, but I think the more options we have
16 for farmers, the more choices they have that
17 ultimately adds up to a good thing for our society,
18 so I thank you.

19 MS. OSBORNE: I think you're right.

20 MR. CARLIN: Thank you very much. I
21 think we have Susanna Brinnon here now, is that
22 correct? Susanna? If you were here earlier, my
23 apologies.

24 MS. BRINNON: No, I had to go and come
25 back, thank you.

1 MR. CARLIN: Okay.

2 MS. BRINNON: I wish I had something to
3 say as May Belle does. I do have some positive
4 things but I think they're just not in this
5 statement. My name is Susanna Brinnon and I
6 represent myself. I believe you probably heard
7 during these hearings many statistics and stories
8 about the treatment of animals in family farming.
9 I would like to speak to another level of the effects
10 of family farming because probably few people will
11 speak of this and that is, for lack of a better word,
12 the effects of these facilities on the energy of our
13 society.

14 By energy, I mean the collective
15 intelligence and psyche of the individuals in our
16 society. I'd like to separate my presentation into
17 the affect on three groups, the animals
18 themselves, the general populace including
19 children and adults and the workers in family
20 farming establishments.

21 First, it is very easy for many people to
22 dismiss the effects of industrial farm animal
23 facilities on the animals themselves. If it were our
24 cats, our dogs, our horse, we could more easily see

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1 administered not to mention the crowded
2 conditions and inhumane treatment are torture.
3 But because we have grown up in a world where we
4 are increasingly separate from our food production
5 we are able to except what we kind of know but
6 don't really want to know, sure that if it was really
7 inhumane the government would not allow it or our
8 parents wouldn't have done it or some such.

9 Unfortunately, such ignorance of what
10 goes on in our name will eventually haunt us and I
11 am not speaking of the inevitable affect on our
12 bodies of consuming steroids and such in our food
13 but on the affect of our collective psyche. I
14 believe we cannot forever ignore the cruelty that
15 goes on in our industrial farm facilities without
16 grave consequences to our spirit as human beings.

17 I believe that our children are growing up
18 accepting such a high level of violence that we are
19 in for serious trouble as a culture. How else can
20 we explain the children who are taking up arms
21 and killing those around them? This new
22 phenomenon in our country must be understood as
23 a reflection of our casualness regarding violence
24 on TV, in movies, in the Middle East, everywhere,
25 including the unseen violence in the heart of our

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1 culture, the industry where our food is produced.

2 This is my second point that it is true
3 that a culture is measured by how it treats its
4 weakest members and I do not remember who said
5 that. Was it Albert Einstein who originated that
6 marvelous quote? In applying this perspective to
7 our culture, we would look at our treatment of the
8 elderly, of the sick, of minorities, of women, and
9 finally our treatment of animals, especially those
10 in factory farms. And unfortunately, if we are
11 honest with ourselves, we must acknowledge that
12 we fall short in every category.

13 We must examine the spiritual heritage we
14 are leaving for our children. Just as we have
15 preferred not to notice the warnings of global
16 warming, we must examine for the sake of our own
17 collective spirit what societal conditions we except
18 in order to continue our lifestyles and our
19 preferences.

20 And third, the effect on those who are
21 employed in factory farms who do the dirty work
22 for us. I work at the state office of unemployment

23 and as you know, poultry farms and poultry
24 production plants are among the largest employers
25 in northwest Arkansas. Many people come here to

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1 work in this industry. I'm very sorry to say that if
2 I had not been a vegetarian before this job, I
3 surely would become one. The stories I have heard
4 about the jobs these people are required to do are
5 quite shameful. What often goes down the
6 production line is quite scary, not to mention the
7 effect on these humans who must every day
8 participate in throwing live animals around among
9 many other questionable activities.

10 We want to eat these animals and so once
11 again we prefer to remain uninformed about what
12 is required of those who bring our food to our
13 table. I did not mention these workers in the list
14 of how we treat those least fortunate in our
15 culture; however, we surely will be called to
16 answer some day for our lack of awareness of their
17 deplorable working conditions. I hope we will look
18 into our hearts and reexamine our priorities while
19 we still have hearts left to do it with.

20 MR. CARLIN: Questions? Thank you very
21 much for your statement.

22 MS. BRINNON: Thank you.

23 MR. CARLIN: I'm going to run through
24 some additional names just to make sure we
25 haven't cut anybody off. Michael Anderson,

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1 somebody said Michael?

2 MR. ANDERSON: That means I'm up?

3 MR. CARLIN: You're five minutes in the
4 blazing headlight that's charging towards you is
5 starting right now.

6 MR. ANDERSON: My five minutes of
7 fame, right?

8 MR. CARLIN: That's right.

9 MR. ANDERSON: Okay. I was contacted
10 about two days ago. I really do not know -- I am a
11 -- what I need to be speaking on. After hearing
12 the last speaker, I have some things I would like to
13 say, but whatever you would like me to address. I
14 am a poultry producer.

15 MR. CARLIN: You quickly say what you
16 want to say and then we'll ask questions on other
17 areas we may want to inquire about.

18 MR. ANDERSON: Okay. I would respond
19 as to the treatment of animals on the farm. As
20 growing up on the farm as a child, I take very

21 personally whenever people would say that I
22 mistreat my animals. I do not doubt that that
23 might happen, but I take that very seriously how
24 animals are treated on the farm. And for myself
25 on my farm, my animals are not mistreated. As for

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1 my people that are employed by me, I feel like I
2 pay them very well. I believe the man I currently
3 employ right now makes \$30,000 a year. That's
4 more than I make at my job in town. What
5 questions do you have for me?

6 MR. CARLIN: Well, tell us very quickly
7 what kind of size of operation. I mean, you're a
8 contract producer for somebody?

9 MR. ANDERSON: Yes, sir, for Tyson.

10 MR. CARLIN: For Tyson?

11 MR. ANDERSON: Yes. I have two laying
12 hen houses. We have -- right now we have about
13 14,500 hens plus roosters on our farm. It would
14 be approximately 1,400 roosters included in that
15 number.

16 MR. CARLIN: Has the contract
17 experience been good?

18 MR. ANDERSON: I have --

19 MR. CARLIN: And share what you can
20 with us in terms of, I mean, do you have a one
21 year, a three year, a seven year?

22 MR. ANDERSON: We were set up with a
23 one year contract. The good part about the way
24 that is set up is it does allow people like myself
25 who always wanted to have a farm. You know, I

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1 grew up on a farm. My father was not wealthy by
2 any means, so if I was going to farm, it would be,
3 you know, make it on my own somehow, and Tyson
4 did allow me to do that.

5 There was a farm that was being
6 repossessed and I was able to step in there and
7 just run it and I didn't have to -- it was a good
8 situation for me, so it allowed me to have the farm
9 experience and let my kids grow up on the farm
10 and raise cattle, as well.

11 The negatives, I feel that the companies
12 have -- I guess they would set it up saying it's an
13 equal partnership. I do not feel that it's an equal
14 partnership with just having a one year contract
15 and some of us having half a million dollars in
16 debt on the farm, you know, maybe even more, \$1
17 million in debt. They hold that over your head.
18 You know, if you don't spend this money here or

19 spend this money here, we'll pull your contract.
20 You know, that side of it I would say is a little bit
21 not real good.
22 MR. ANDREWS: A couple of years ago in
23 the Kansas legislature there was proposed
24 legislation, The Producer Protection Act, that dealt
25 with contract poultry growers and a turkey farmer

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1 from Southwest Kansas came in and complained
2 about the fact that he was required to introduce
3 technology for water for his poultry that he
4 thought he didn't need but he was under a lot of
5 pressure to do so. Have you had any of that
6 experience?

7 MR. ANDERSON: I have had times in the
8 past where they would ask me to do things that I
9 did not feel was right for the birds but --

10 MR. ANDREWS: I don't want to --
11 another question is, has there been in your
12 contract binding arbitration requirements?

13 MR. ANDERSON: Yes. Where you have to
14 go to an arbitrator?

15 MR. ANDREWS: Yeah.

16 MR. ANDERSON: Yes, that is the way it's
17 stated.

18 MR. ANDREWS: Okay. And how about
19 the capacity to talk to your neighbors or other
20 growers about your contract, are you limited or do
21 you have that capacity?

22 MR. ANDERSON: I've never been told I
23 can't talk to them. However, they do not let us
24 have that information just, you know, where those
25 growers are. We feel like we're on an island, I

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1 guess.

2 MR. ANDREWS: I'm asking these
3 questions out of about eight years of working with
4 poultry growers and listening to their stories, so I
5 appreciate the frankness that you've brought to
6 this discussion.

7 MR. CARLIN: Could you expand a little
8 bit and give us a little more about what you might
9 have been told to do? I mean, in terms of, you
10 know, the corporate entity saying this is what
11 you're going to do, what are we talking about here?

12 MR. ANDERSON: If I had had a little
13 time to prepare, I could have done better, but let
14 me think. The most recent was the one on water.
15 I was on a well and they told me that I had to go to
16 city water because they felt like the well water was

17 not good enough. I'm not going to say that was
18 right or wrong because I have no evidence to the
19 contrary.

20 From time to time, they'll say you've got
21 to upgrade your equipment or you have to change
22 out, I think the last thing I could remember was
23 my scales. They said my scales weren't up to par
24 so I would have to put in new scales. You know,
25 lighting, sometimes they'll want to go with a

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1 certain type of light and they'll do that a few years
2 and they'll say, well, we don't like those type of
3 lights. We want to go to these type of lights and
4 that cost is incurred by the farmer, and then they
5 might change their mind a few years later and go
6 back to the original.

7 MR. CARLIN: How many one year
8 contracts have you had?

9 MR. ANDERSON: I am on my -- this is my
10 ninth year, I believe.

11 MR. CARLIN: Okay. And obviously you
12 have survived those nine years. They haven't cut
13 you off. You've either done what they told you to
14 do or you've convinced them that not doing it was
15 right.

16 MR. ANDERSON: Or out lasted
17 management. Sometimes that, you know, you kind
18 of learn that in our field. In fact, an older
19 producer told me that when I got into it. He said,
20 you know, they'll have a new group come in with
21 different ideas and, you know, sometimes you can
22 -- they'll be better, hopefully.

23 MR. CARLIN: In your observation are you
24 aware of colleagues of yours that have been shut
25 down or closed out because of the company

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1 deciding they didn't like the way things were being
2 done.

3 MR. ANDERSON: I guess the most recent
4 thing in my mind would be, I believe last year they
5 had to -- in the industry they'll have either too
6 many eggs or not enough eggs and it's a constant
7 battle to keep that -- keep the supply correct.
8 Last year they brought in new management, I
9 believe it was last year or year before last, and
10 decided we had too much production in the field
11 and so when they brought the new management in
12 they suddenly got very, very strict, unreasonably
13 so, and frustrated a lot of growers. And some of
14 them quit on their own and they actually made too

15 many quit and so now they're in the opposite --
16 you know, they have the opposite problem. They
17 don't have enough eggs, so now they've slacked off.
18 MR. CARLIN: When you say some quit,
19 they just didn't want to continue the contract?
20 MR. ANDERSON: Right.
21 MR. CARLIN: They were able to afford to
22 -- their house was paid for or --
23 MR. ANDERSON: Correct, correct. And I
24 have seen since -- I don't know if you're aware of
25 it, but here a few years ago they had a situation

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1 where the hog side of it was not profitable and
2 they tried to shut down the hog farms and that
3 didn't go well for them. They were just going to
4 leave all these guys with their payments and they
5 took them to court and I guess Tyson says that,
6 you know, we had to do an arbitrator but the judge
7 threw that out and took them to court. And from
8 what I understand, Tyson had to pay off those
9 farms, so I believe since that has happened they
10 have been a little more careful about forcing their
11 hand. So for their producer that has been a good
12 thing, I would say.
13 MR. CARLIN: But your plan is to
14 continue your year to year?
15 MR. ANDERSON: Until I get my farm paid
16 off.
17 MR. CARLIN: John?
18 MR. HATCH: Yeah. What do you think
19 the contractor could do to improve the relationship
20 between farmers and the company?
21 MR. ANDERSON: What the farmer can?
22 MR. HATCH: You know, how to make it
23 more equitable for everybody. They've got to make
24 a profit. We know that.
25 MR. ANDERSON: Right.

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1 MR. HATCH: But how could they do that
2 in such a way that you kind of feel like you're in
3 charge, your life is okay?
4 MR. ANDERSON: Right. I guess because
5 you are going to have -- and you have to protect
6 the company, too. I mean, you just can't let
7 anybody grow chickens because you have people
8 out there that do silly things and would cost the
9 company money, you know. I guess if there was a
10 board of growers who could get together and
11 whenever the company says we want this done and
12 then they could go to the board because, you

13 know, a lot of these growers have been growing for,
14 you know, 20 years and they know how to grow a
15 chicken. And then, you know, sometimes they'll
16 bring in these people who are just out of college
17 and, you know, they think they know everything
18 and they don't. And I'm not -- you know, I went to
19 college, too.

20 MR. CARLIN: None of those could be
21 from Kansas State.

22 MR. ANDERSON: I understand.

23 MR. CARLIN: It had to be the University
24 of Arkansas.

25 MR. ANDERSON: Okay. But, you know,

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1 they come in with these new ideas and, you know,
2 a lot of these ideas have been before 15 years ago
3 and these farmers say, hey, you know, we've been
4 down that road, it didn't work, you know. And I
5 believe the company would actually gain from the
6 experience of some of these growers if they could
7 get a group together that would work together on
8 some of these things.

9 MR. CARLIN: Interesting. I believe
10 that's our last question, but thank you very much
11 for coming and we appreciate you answering our
12 questions.

13 MR. ANDERSON: Okay. Thank you very
14 much.

15 MR. CARLIN: I want to do one last
16 check. Ken Knies? Michael Chase? Abel
17 Tomlinson? Nancy Radcliffe? Mary Loughin?
18 Jason Hatfield, Lundy and Davis? Kelly Petty? Is
19 there a Louann Todd?

20 MS. TODD: That would be me.

21 MR. CARLIN: And you are it.

22 MS. TODD: I'm it.

23 MR. CARLIN: Final. Come to the
24 podium, please.

25 MS. TEBBITS: You don't show a Kathy

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1 Tebbits on there?

2 MR. CARLIN: Pardon?

3 MS. TEBBITS: You don't show a Kathy
4 Tebbits on there anywhere?

5 MR. CARLIN: Well, Kathy, we're certainly
6 going to let Kathy speak, so you're not last
7 Louann.

8 MS. TODD: Oh, I'm next to last.

9 MR. CARLIN: Next to last. You're on.

10 (Short break from 5:38 p.m. to 5:42 p.m.)

11 MR. CARLIN: Fred? Questions? Fred,
12 you ought to at least applaud her.

13 MR. KIRSCHENMANN: Well, I just, you
14 know, again --

15 MS. TODD: We've run into each other
16 before.

17 MR. CARLIN: I thought so.

18 MR. KIRSCHENMANN: I want to commend
19 you for continuing to bring forward the fact that
20 we do have options.

21 MS. TODD: Well, and I didn't even cover
22 it. I've got some supporting information for the
23 gentlemen, some of my even more current studies
24 on the effects on communities and there's not time
25 to present all of that, but if you're interested I'll

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1 be glad to provide you with the information.

2 MR. CARLIN: We'll be happy to receive
3 whatever you want to send us.

4 MS. TODD: Okay. All right. Because --

5 MR. CARLIN: Michael?

6 MS. TODD: -- that might be helpful.

7 MR. BLACKWELL: I think I heard your
8 answer to this question one way or another. So
9 you believe that if the economics were different,
10 meaning there was an ability to make a decent
11 living as a farmer, as a producer, we would attract
12 more people into that line of work? Again, my
13 question is based on the trends that we've seen,
14 the population trends, less and less interest in --
15 I've heard of a case --

16 MS. TODD: Well, I see what you're saying
17 and you're acting like this is a full-time 24/7/365
18 job. How about if it's supplemental income and
19 that's even more -- this is back to the Victory
20 Garden thing. All those folks that went on the
21 Victory Gardens, was that their whole occupation,
22 probably not, most likely not. Is this something
23 that your children can do that they won't put you
24 in jail for child labor, yeah, possibly. Okay.
25 Keeps them off the streets, go figure.

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1 MR. CARLIN: Okay.

2 MS. TODD: In other words, I think you're
3 missing an opportunity to encourage people to
4 explore food production, and will they all raise
5 cows, will they all raise chickens, no. Don't ask
6 me to raise gardens. Vegetables commit suicide
7 when they see me coming, but I do really, really
8 well with cattle. So I should do what I do and

9 somebody else ought to get out here and do the
10 veggies. Is there anything wrong with that? Like
11 Wendell said, agribusiness has taken nature's
12 system of small diversified farms where you never
13 had a waste problem and we've turned this thing
14 into two problems instead of a solution. Okay.

15 MR. CARLIN: Thank you very much.
16 Thank you very much. Kathy Timmons?

17 MS. TEBBITS: Tebbits.

18 MR. CARLIN: Our apologies if we didn't
19 get you on a list officially, but --

20 MS. TEBBITS: I don't know how that
21 happened. I just signed one list and that might
22 have been it. I'll have to use two pairs of glasses
23 here and I'll just continue where Marge left off and
24 I just appreciated what she had to say so much
25 and, in fact, I just wanted to thank everybody for

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1 the really high level of discussion here today. We
2 don't get much of that out here in the woods.

3 I helped to start the Oklahoma Food Coop,
4 www.oklahomafood.coop, and that was sort of in
5 response to a problem. I was working for the
6 Cherokee nation, and I'm not here as an official
7 representative of the Cherokee Nation, but we
8 organized what we called the small farm project.
9 And we were looking at ways of how can we help to
10 keep people on what is today, you know, a hundred
11 year aftermath of the allotment process so that
12 people can like keep their culture and still live
13 rural and not get dragged out into urban
14 economies where they aren't able to learn their
15 language and practice religion and stuff like that.

16 One of the ideas that we came up with
17 was that we would start the Oklahoma Food Coop
18 and on Thursday of this week there will be about
19 \$30,000 worth of Oklahoma farm goods straight
20 from the farm or nearby that will go to a
21 centralized location and we'll all just -- a bunch of
22 volunteers will bag it up into groceries and send it
23 back on the same trucks that brought in the
24 vegetables at the beginning of the day.

25 And what we're finding after doing that --

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1 we started that like a couple years ago and, you
2 know, we do a quarter of a million dollars worth of
3 production every year and we've got about, maybe
4 800 coop members and maybe -- probably about
5 200 farmers who participate. But what we found
6 in the course of that process is that we on several

7 occasions have been sort of approached by the
8 Department of Ag, State Ag Department and others
9 with non -- with compliance issues that have to do
10 with regulations. And I think what's happened
11 historically is that we've designed our food system
12 to be a highly effective centralized food system
13 that doesn't really address the local, the ability to
14 have more decentralized local systems.

15 So in the course of looking at some of the
16 problems we faced, like when the FDA department
17 came in and wouldn't let us deliver the chickens
18 that day, is that we came up with kind of like a
19 list of obstacles and barriers to farm direct
20 marketing. And they have to do with the fact that
21 we mostly operate under a monopsony. Monopsony
22 I think is what it's called, where we have systems,
23 like systems that are run by just a handful of very
24 large producers and it has limitations on the
25 amount of diversity.

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1 So I wanted to just toss out what I think
2 are some ideas that might be breadcrumbs that can
3 be used in the direction of looking for alternatives
4 to kind of like create systems in a way that there
5 is more diversity, there's more food security,
6 there's more opportunity for genetic diversity,
7 more opportunity for public health and safety
8 issues to be addressed by a diversification as
9 opposed to a centralized kind of like setting.

10 And one would be to increase more open
11 market. One way to do that would be to exempt
12 small farms from a lot of the ag regulations. Some
13 of the areas that that turns out to be a problem in
14 are inspection, processing, farm direct sales rules,
15 farmers market rules. There's some exceptions for
16 farmers markets and producer coops.

17 And then also a lot of times farmers can't
18 have agents, you know, it has to be like directly
19 from the hands of the farmer to the hands of the
20 consumer. So in specific ways, there are a lot of
21 ways that we could look at how the USDA does that
22 and then how that filters down to the state level
23 and is interpreted by the state as a way of solving
24 some of those problems.

25 If we increased labeling so that

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1 consumers can actually see more about the
2 products they buy, then they can make conscious
3 choices to support the kind of farming that is
4 consistent with the values that they want to

5 perpetuate.
6 And the other really big thing, and I can't
7 say it in less than a minute, it has to do with
8 caustic externalizations and removing subsidies
9 all the way across the board. I realize that we
10 have to balance issues like hunger and poverty in
11 this country and producing enough food for, as you
12 say, three billion people soon to be four billion
13 people. To get to that point, I think we have to be
14 able to put the assistance directly to where it
15 helps people who are in poverty.
16 And we also need to address the really big
17 issue. If we can do this one then the problem will
18 be solved and that's overshoot of the carrying
19 capacity of the earth. That's kind of a big topic to
20 leave on.
21 MR. CARLIN: Thank you, Kathy. Again,
22 we apologize for not connecting.
23 MS. TEBBITS: Well, I realized you --
24 MR. CARLIN: We didn't forget you.
25 MS. TEBBITS: Yeah. Thank you.

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1 MR. CARLIN: Thanks a lot.
2 MR. MILLER: Mr. Chairman, could I have
3 30 seconds of your time, please?
4 MR. CARLIN: Let me --
5 MR. MILLER: And I apologize about my
6 remark.
7 MR. CARLIN: I want to think about it,
8 but first, is there anybody else that thought they
9 were on the list and I haven't called? Okay.
10 You've got 30 seconds and it's going to be 30
11 seconds.
12 MR. MILLER: I'm not a neurologist or a
13 veterinarian, but I was a fishery biologist. Now,
14 when we raised fish in a fish hatchery in order to
15 do a check, some of you seem to be quite
16 knowledgeable on that thing. Whenever we wanted
17 to check our lots for diseases, we had to use 60
18 fish in order to get a 95 percent. Tyson is talking
19 about 11 birds out of a flock. You know, I find a
20 little bit of a problem with that. And that's only
21 95 percent and that's hopefully, you know --
22 otherwise when you go to 97, you had to kill 120
23 fish, et cetera, et cetera, but at 11 birds per flock
24 I don't think they're even coming close to 95
25 percent. Thank you.

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1 MR. CARLIN: Thank you. And I thank all
2 of you for your -- remind us of your name for the

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record.
MR. MILLER: Dwayne Miller.
MR. CARLIN: Dwayne Miller. And make a
note, he's not very friendly. Okay. I thank you
all. I thank the commissioners for their
attendance and participation and I don't think
anybody embarrassed anybody. You all did a
pretty good job. I'm proud of you.
(HEARING CONCLUDED AT 5:53 P.M.)

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CERTIFICATE
STATE OF ARKANSAS)
) SS
COUNTY OF WASHINGTON)
I, KERRI PIANALTO, Certified Court
Reporter within and for the State of Arkansas, do
hereby certify that the above and foregoing hearing
was by me taken and transcribed; and that I am
not an attorney for nor relative of any of said
parties or otherwise interested in the event of said
action.
IN WITNESS WHEREOF, I have hereunto
set my hand and official seal this 22nd day of
February, 2007.

KERRI PIANALTO, CCR
State of Arkansas, No. 651