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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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IN THE MATTER OF:

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LIVESTOCK WASTE REGULATIONS

R97-15

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35 Illinois Adm. Code 506

(Rulemaking)

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Proceedings held on January 31, 1997, at

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9:05 a.m., at the Ramada Inn, 405 South 44th

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Street, Mt. Vernon, Illinois.

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Reported by: Darlene M. Niemeyer, CSR, RPR
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A P P E A R A N C E S

- Illinois Pollution Control Board:
- Claire A. Manning, Board Chairman
- Ronald C. Flemal, Ph.D., Presiding Board Member
- G. Tanner Girard, Ph.D., Board Member
- Anand Rao, Environmental Scientist for the Board
- Marie Tipsord, Attorney for the Board
- Cynthia Ervin, Attorney to Chairman of the Board
- Charles M. Feinen, Attorney
- K.C. Poulos, Attorney
- Audrey Lozuk-Lawless, Hearing Officer

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P R O C E E D I N G S

(January 31, 1997; 9:05 a.m.)

HEARING OFFICER LOZUK-LAWLESS: Good morning and welcome.

Today is the fourth of five hearings that the Board will be holding in this matter, which is titled Livestock Waste Regulations, 35 Illinois Administrative Code 506.

My name is Audrey Lozuk-Lawless. I am the Hearing Officer in this matter. Today we have several Board Members also present with us. Seated over there is Chairman Claire Manning.

CHAIRMAN MANNING: Welcome.

HEARING OFFICER LOZUK-LAWLESS: Dr. Ronald Flemal and Dr. Tanner Girard. We also have several attorneys on staff here today. Ms. Marie Tipsord, Cindy Ervin, Chuck Feinen and K.C. Poulos. We also have a member of our technical unit here, Mr. Anand Rao.

Thank you very much for coming. The only remaining hearing that is currently scheduled is a hearing that was rescheduled due to weather that we had to cancel which will be in Champaign on Friday, February 7th, if anyone is interested in attending

1 that. It also begins at 9:00 a.m., and the address
2 and other information you can receive in the back
3 of the room or approach any of us.

4 Today's proposal was submitted by the
5 Department of Agriculture. Today we will hear a
6 summary from the Department of Agriculture
7 regarding the proposal as well as summaries from
8 the Department of Natural Resources, the Illinois
9 Environmental Protection Agency and the Illinois
10 Department of Public Health.

11 Today's hearing will be governed by the
12 Board's rules and procedural rules on hearings.
13 Any information which is relevant and not
14 repetitious will be admitted into the record.
15 Today we do have a court reporter who will be
16 transcribing what is said today to make a complete
17 record for any Board Members or any members of the
18 public who are not with us today who would like to
19 know what was happening. Please be aware that if
20 you do want to ask questions we would like you to
21 approach the podium so that the court reporter and
22 everyone else in the audience can hear you.

23 After the agencies have given their
24 summaries, we will then proceed with some prefiled

1 questions directed towards the Department of
2 Agriculture submitted by the Illinois Farm Bureau,
3 Illinois Beef Association and the Illinois Pork
4 Producers. After that we will ask if there is
5 anyone in the audience who wants to ask questions
6 of any of those government agencies.

7 Following that questioning, we will begin
8 with the prefiled testimony of the following
9 people, which would be Joe Bob Pierce, Michael
10 Rapps, Dr. Richard Tubbs, Roger Marcoot, Bill
11 Campbell, Jim Frank and Michelle Paul. After those
12 witnesses have testified, you will be able to ask
13 questions to each of those persons.

14 If anyone else in the audience would wish
15 to give testimony, we have put a sign-up sheet in
16 the back of the room. Please sign up and after
17 those who have prefiled have already testified we
18 will give you the opportunity. When you are
19 testifying you will be sworn in and subject to
20 cross-questioning.

21 If you would -- if you still want to
22 participate but don't want to be sworn in today and
23 give testimony, we encourage you to file a public
24 comment with the Board. Send that to the Illinois

1 Pollution Control Board at 100 West Randolph, Suite
2 11-500 in Chicago, Illinois, 60601. Please do mark
3 at the top that this has been docketed as R97-15.

4 Also, lastly, there are notice lists and
5 service lists at the back of the room. If you
6 would like to receive copies of the Board's
7 opinions and orders as well as any opinions and any
8 orders that I put out as the Hearing Officer,
9 please sign up on the notice list. If you want to
10 receive copies of any testimony or post hearing
11 briefs, then you would also put your name on the
12 notice list.

13 Okay. Dr. Flemal?

14 PRESIDING BOARD MEMBER FLEMAL: Thank
15 you.

16 On behalf of the Board, I would like to
17 welcome all of you to this Pollution Control Board
18 hearing. Many of you are perhaps not familiar with
19 the Illinois Pollution Control Board, and I would
20 like to take just a few moments to introduce us to
21 you a little bit and to introduce as well to you
22 the process that we are engaged in today.

23 We have on the side table here, along
24 with much of the other documentation that has been

1 entered into this record, a little brochure, public
2 assistance, public access information to the
3 Illinois Pollution Control Board. We invite you to
4 take a copy and look at it and it will go into some
5 of the things I am about to say in more detail, if
6 you would like to pursue them.

7 The Board consists of seven members,
8 three of whom are present here today. The other
9 four are engaged in other Board activities today
10 and unfortunately can't be with us. The Board
11 members are appointed by the Governor with consent
12 of the Illinois Senate.

13 We have two major areas of
14 responsibility. One is to sit in adjudication of
15 various kinds of contested cases that are brought
16 before us. In any given year we may have 200, 300
17 or even 400 cases of that sort to decide. They
18 range over a broad set of responsibilities that we
19 have to discharge. Some of them involve sitting in
20 disposition of enforcement actions that we view,
21 decisions made by other agencies, for example,
22 review of contested permits, actions that might be
23 brought, and the details of those you will find in
24 the brochure.

1 We are engaged today in the second of the
2 two kinds of activities that the Board has
3 principal responsibility for, and that's the
4 promulgation of rules in protection of the Illinois
5 environment. The Pollution Control Board is
6 responsible for adopting all of the environmental
7 control standards for the State of Illinois.

8 In particular today we are engaged in an
9 activity that the Board has been charged with under
10 the Livestock Facilities Management Act. Copies of
11 that Act and the background information on it, if
12 you are not already familiar, again, are part of
13 the materials that we have on the side table for
14 you.

15 Under that Act we have been given the
16 responsibility by the Illinois General Assembly to
17 flesh out certain portions of that Livestock
18 Facilities Management Act. The Illinois Department
19 of Agriculture has given us proposals to how they
20 see that charge best being exercised, how we best
21 flesh out that proposal.

22 We have been engaged, since we have
23 received that proposal, in getting additional
24 information; information via this hearing process.

1 We have already had three hearings, which we all
2 believe have been very successful in providing us
3 information. We will have, in addition to this
4 hearing, as the Hearing Officer indicated, one more
5 public hearing to gather yet further information.
6 We will also have a public comment period where all
7 interested persons may submit their written
8 comments to us regarding the proposal of the
9 Illinois Department of Agriculture.

10 When we have all this information
11 assembled, the Board will deliberate over that
12 entire record, the proposal itself, and various
13 suggestions that have been made regarding that
14 proposal, to determine its ultimate fate. The
15 Board could, among its possibilities, determine not
16 to change the proposal that the Department of
17 Agriculture has given us and adopt it essentially
18 in that form or we may, as another alternative,
19 consider moving forward but in some different form
20 or detail or specifics or amended form over the
21 proposal that has been given to us.

22 As many of you are aware, there has
23 already been a significant number of amendments
24 that have been suggested to the proposal as a

1 result of this hearing process. And part of our
2 deliberation will be to review the merits of those
3 recommended changes to see if ultimately they are,
4 in the Board's judgment, appropriate to move
5 forward on. Today, again, as I see in the prefiled
6 testimony, we are going to have presenters or
7 testifiers who will be, once more, giving us some
8 information as to whether they believe we ought to
9 amend or move forward as proposed.

10 It is very important in this information
11 gathering process for us that we, indeed, do have
12 your perspective. We come to you for the purposes
13 of getting your perspective on the rule before us.
14 I assure you that what you do tell us will be given
15 serious consideration and ultimately will be
16 factored into any decisions that the Board makes on
17 how this rule proceeding actually moves forward.

18 CHAIRMAN MANNING: I likewise -- not to
19 take much more time -- but I just wanted to welcome
20 you, as well, as the Chairman of the Board, on
21 behalf of the Board. I appreciate your interest,
22 and the Board understands this to be a very
23 important issue in the State of Illinois.

24 Welcome members of the public. Welcome

1 members of the livestock and the farming community
2 in this area and throughout the state. And welcome
3 really everybody that is interested in this very
4 issue.

5 Welcome also to our fellow members or our
6 sister state agencies sitting to our left.
7 Understand that a lot of work really has gone into
8 this rule proposal before it was even proposed to
9 us. The statute designated the Department of Ag to
10 lead a work group of the Department of Agriculture,
11 the Environmental Protection Agency and the
12 Department of Natural Resources and the Department
13 of Public Health. Representatives of all of those
14 agencies are here today to explain the rule and
15 their position on the rule.

16 We appreciate all of the input that they
17 have had. This has really been an exercise of
18 government working well and working together and we
19 appreciate it. They are here to answer any
20 questions you may have as well in terms of the rule
21 proposal.

22 So with that, is there any members of the
23 state or local government that would like to
24 identify themselves today? I know we have the --

1 yes, sir.

2 MR. ENGLAND: I am Richard England. I am
3 the Chairman of the Jefferson County Board here in
4 Jefferson County.

5 CHAIRMAN MANNING: Thank you. Well, with
6 that, then, I think it is time that we proceed and
7 try to get as much on the record as we can today so
8 that we can reflect and get a great decision in
9 terms of the proposal before us.

10 Go right ahead.

11 HEARING OFFICER LOZUK-LAWLESS: I am
12 sorry, sir, would you please repeat your last name
13 for the court reporter.

14 MR. ENGLAND: It is England, just like
15 the country.

16 HEARING OFFICER LOZUK-LAWLESS: Okay.
17 Thank you, sir.

18 At this time I would like the reporter to
19 swear in the agency witnesses, please.

20 (Mr. Chester Boruff, Mr.
21 Warren Goetsch, Mr. Scott
22 Frank, Mr. Richard Warrington,
23 Mr. John Marlin and Mr. David
24 Antonacci were sworn in by the

1 court reporter.)

2 HEARING OFFICER LOZUK-LAWLESS: Thank
3 you.

4 Mr. Boruff, would you like to begin?

5 MR. BORUFF: Okay. Thank you. Good
6 morning.

7 My name is Chet Boruff, and I am employed
8 by the Illinois Department of Agriculture as Deputy
9 Director for the Division of Natural Resource and
10 Ag Industry Regulation. I am responsible for the
11 program areas of the Department dealing with animal
12 health and welfare, natural resource protection,
13 regulation of the feed, seed and grain industry,
14 and the weights and measures program.

15 At today's hearing I will be offering a
16 summary of the written testimony which the Illinois
17 Department of Agriculture entered into evidence
18 with the Pollution Control Board at its hearing in
19 Jacksonville. At that time, two other employees of
20 the Department, Scott Frank and Warren Goetsch,
21 also presented testimony relative to the proposed
22 rules. Mr. Frank and Mr. Goetsch will not be
23 providing testimony today, but will be available
24 for questioning as the hearing proceeds.

1 Illinois has long been recognized as one
2 of the leading livestock producing states in the
3 nation. Due to its access to abundant feed
4 supplies, strong markets and a well developed
5 infrastructure, the Illinois livestock industry has
6 been a major contributor to the state's overall
7 economy. Livestock production accounts for a
8 sizeable portion of the state's total gross ag
9 economy and several types of species are produced
10 in the state.

11 The industry is undergoing major changes
12 in structure due to economic and marketing forces
13 which are not unique to Illinois. As a result, it
14 has become common for many operations to expand,
15 specialize, and invest in capital-intensive
16 production units in recent years. The industry has
17 been faced with challenges regarding market
18 structure, access to capital, a limited supply of
19 trained employees and increased regulations. In
20 many cases in Illinois, as well as in other states,
21 traditional and long established livestock
22 producers have chosen to leave the industry rather
23 than to address the challenges I listed above.

24 In an effort to strengthen the industry

1 and position Illinois to be a continuing leader in
2 livestock production, Governor Edgar convened the
3 Livestock Industry Task Force in July of 1995. The
4 Task Force has addressed a wide range of topics
5 focusing on areas of economic development,
6 marketing, technology transfer and environmental
7 concerns regarding livestock production. Its
8 recommendations have dealt with a number of issues
9 including concerns addressed at this hearing.

10 The recommendations of this Task Force
11 were taken into consideration by the legislative
12 sponsors of the bills which eventually became the
13 Livestock Management Facilities Act.

14 The Livestock Management Facilities Act
15 is intended to be preventive in nature, since
16 Illinois currently has statutes in place to deal
17 with situations once pollution has occurred. The
18 Act sets in place regulations providing for the
19 proper siting, construction, operation and
20 management of livestock management facilities and
21 their associated waste handling structures. It is
22 the intent of the Act and quoting from the Act "to
23 maintain an economically viable livestock industry
24 in the State of Illinois while protecting the

1 environment for the benefit of both the livestock
2 producer and persons who live in the vicinity of
3 the livestock production facility," end of quote.

4 Section 55 of the Act established a
5 Livestock Management Facilities Advisory Committee,
6 made up of the Directors of the Department of
7 Agriculture, Natural Resources, Public Health and
8 the Illinois Environmental Protection Agency or
9 their designees. I was designated by Illinois
10 Department of Agriculture Director Doyle to serve
11 as the Chair of the Committee. The Members of the
12 Committee were charged to review, evaluate and make
13 recommendations to our Department for rules
14 necessary for the implementation of the Act.

15 The Committee met five times during the
16 summer and fall of 1996 to carry out its mission.
17 The departments and agency represented on the
18 Committee provided a vast amount of professional
19 knowledge and experience based on a broad spectrum
20 of topics pertinent to this subject. The
21 Department recognizes them for their efforts and
22 appreciates their recommendations and inputs
23 throughout the rule proposal development process.
24 The Committee considered several sources of

1 information, such as technical papers, published
2 design standards, pertinent information from other
3 states, and information provided by industry and
4 private individuals as it made its recommendations
5 to the Department.

6 In the fall of 1996, as the Advisory
7 Committee was meeting to develop the proposed
8 rules, concerns were raised to the Illinois General
9 Assembly regarding the absence of regulations,
10 since the permanent rules had not yet been
11 adopted. As a result, the Department developed and
12 proposed to the Illinois Pollution Control Board an
13 emergency rule pertaining to certain portions of
14 the Act, namely, lagoon registration, livestock
15 facility siting, waste lagoon design criteria,
16 waste management plans and certified livestock
17 manager training. The Board adopted these
18 emergency rules on October 31, 1996. These rules
19 are currently in place until such time as the Board
20 adopts the permanent rules.

21 I want to briefly summarize the rules
22 which we have proposed to the Pollution Control
23 Board. Subpart A sets forth the applicability,
24 severability, definitions and incorporations by

1 reference for the proposal. This subpart follows
2 concepts developed and included in the emergency
3 rules adopted by the Board under Docket R97-14.
4 All but six of the terms defined within this
5 section have been taken directly from the Act
6 itself. Definitions proposed in the rules will
7 further clarify concepts necessary for the
8 enforcement of the regulations. An important issue
9 relative to the timing of the application of
10 setbacks needs clarification, and the Department
11 respectfully requests that the Board consider a
12 further clarification of this important matter.

13 Subpart B of the proposal is organized
14 into eight major sections and outlines the approach
15 required of owners and operators of new or modified
16 waste lagoons for the registration, design,
17 construction, closure and ownership transfers of
18 such facilities. The proposal closely follows the
19 emergency rules adopted by the Board. This subpart
20 takes into consideration site-specific
21 investigation which is to be performed by the owner
22 prior to registration and construction.

23 Design criteria are based upon recognized
24 design parameters established by either the

1 American Society of Agricultural Engineers or the
2 United States Department of Agriculture Natural
3 Resource Conservation Service. This subpart
4 establishes criteria for the construction of lagoon
5 berms, monitoring wells, liners, lagoon closure and
6 ownership transfers.

7 Subpart C deals with waste management
8 plans. The application of livestock waste to the
9 land is one of the oldest forms of recycling, and
10 livestock waste has been used for generations to
11 supply nutrients for crop growth and development.
12 When properly applied, livestock waste can be a
13 valuable resource, however, improper application
14 may have a negative impact on surface and
15 groundwater, as well as detrimental effects to the
16 soil.

17 Subpart C outlines the factors to be
18 considered by a livestock producer when preparing a
19 waste management plan specific to their operation.
20 Many livestock producers in Illinois have had waste
21 management plans prior to the development of the
22 Livestock Management Facilities Act in an effort to
23 provide sound stewardship of their soil resources
24 while using animal manure as a valuable agronomic

1 resource.

2 The Illinois Department of Agriculture
3 intends to further detail the criteria to be used
4 by a livestock producer when developing a waste
5 management plan during a subsequent rulemaking
6 process and with the full involvement of
7 representatives of livestock producers, the
8 scientific community, and the ag supply industry.
9 When completed, this activity will outline the
10 information necessary to complete a waste
11 management plan by establishing criteria for crop
12 nutrient values, crop yields, nitrogen
13 availability, and proper disposal methods of
14 livestock waste.

15 Subpart D provides details for the
16 establishment of a certified livestock manager
17 program, intended to enhance the management skills
18 of the livestock industry in critical areas, such
19 as environmental awareness, safety concerns, odor
20 control technologies, and the development of manure
21 management plans.

22 Subpart E of the proposed rules deals
23 with penalties associated with violations of three
24 areas of the Livestock Management Facilities Act,

1 namely lagoon registration and certification,
2 certified livestock manager status, and waste
3 management plans.

4 Subpart F deals with financial
5 responsibility and relates to Section 17 of the
6 Livestock Management Facilities Act. The intent of
7 this section is to ensure that in the event of a
8 closure of a lagoon, the cost of that closure shall
9 be borne by the owner of the lagoon versus a unit
10 of local government.

11 Section 17 of the Act outlines surety
12 instruments which may be used to ensure financial
13 responsibility. With the concurrence of the
14 Pollution Control Board, the Illinois Department of
15 Agriculture intends to adopt rules and procedures
16 in a separate rulemaking process pursuant to the
17 Illinois Administrative Procedures Act.

18 Subpart G deals with setback distances,
19 which are intended to protect air quality and to
20 control odors which result from livestock
21 production, but which may be offensive to neighbors
22 of individual operations. It is very likely that
23 any livestock operation, regardless of size, will
24 generate some level of odor by the very nature of

1 the operation. Many factors contribute to the
2 level of odor resulting from an operation. The
3 intent of establishing setback distances is to
4 provide for a dilution effect which will lessen
5 odors coming from a livestock operation before they
6 reach surrounding persons or homes.

7 Clearly, the issues which we face are
8 complex, have far reaching impacts, and are not
9 easy to resolve. As discussions have been held at
10 several locations around the state over the last
11 year and a half, it seems that two main themes have
12 emerged regarding livestock production in the State
13 of Illinois.

14 First, is one of providing protection for
15 the environment and the natural resources of the
16 state. This concern is not unique to Illinois, and
17 other states have dealt with the same issues in a
18 variety of ways. The rules which we have proposed
19 will serve to reinforce the preventive nature of
20 the Livestock Management Facilities Act as it was
21 intended by the Illinois General Assembly. The
22 proposed rules take into account the most current
23 design standards and criteria, scientific
24 information and production practices to ensure that

1 our natural resources are protected.

2 Another theme has developed which relates
3 to the social and the economic changes occurring
4 within the livestock industry. Much has been said
5 about protecting the family farm and restricting
6 the size of megafarms as they are being considered
7 in Illinois. The rules which we are proposing to
8 the Pollution Control Board do not address these
9 social and economic issues, but rather, they
10 provide for the protection of our natural resources
11 in our environment.

12 However, there are many producers and
13 industry experts who would warn that the increased
14 cost of regulations may actually lead to an
15 acceleration of small to mid-sized livestock
16 operations leaving the industry. As a result, the
17 Illinois Department of Agriculture recognizes that
18 the rules to be adopted need to be fair in their
19 approach, economically reasonable in their
20 implementation, and based upon sound, scientific
21 information.

22 Thank you for the opportunity to be
23 here.

24 HEARING OFFICER LOZUK-LAWLESS: Thank

1 you, Mr. Boruff.

2 We will now turn to the testimony from
3 the Illinois Environmental Protection Agency. Mr.
4 Warrington.

5 MR. WARRINGTON: Thank you. Good
6 morning. My name is Rich Warrington. I am
7 Associate Counsel for Regulatory Matters for the
8 Bureau of Water of the Illinois Environmental
9 Protection Agency. On behalf of our Director, Mary
10 Gade, and James Park, Chief of the Bureau of Water,
11 we would like to welcome you to these proceedings
12 and thank you for your interest.

13 I will be summarizing the testimony that
14 James Park gave at our hearing in Jacksonville just
15 a few weeks ago. We have extra copies of his full
16 testimony. It will be available at the side table
17 during the break.

18 The Illinois EPA supports the adoption of
19 R97-15. The addition of operator certification and
20 the mandate for Livestock Waste Management Plans
21 for the largest of these facilities is a positive
22 step in establishing consistent and responsible
23 operation of livestock waste handling facilities in
24 this State. We endorse and encourage the training

1 and educational programs set forth in these rules
2 as a meaningful approach in making the agricultural
3 community aware of the responsibilities and
4 beneficial aspects of sound livestock waste
5 management. This program, when fully developed,
6 promises to allow for the communication and the
7 evaluation of innovative technology, as it affects
8 the development of the operators' waste management
9 plans. The expansion of the setback limits, as
10 mandated under the Livestock Management Facilities
11 Acts, is also a necessary step in addressing the
12 potential detrimental aspects of large livestock
13 facilities.

14 The Illinois EPA would like to make three
15 recommendations for these proposed rules. First,
16 is that soil boring requirements are satisfactory
17 for the vast majority of sites in Illinois as
18 prescribed under 35 Illinois Administrative Code
19 506.202 (b). However, the Illinois Department of
20 Agriculture needs adequate flexibility to require
21 additional borings in the case of disturbed or
22 mined land that may have altered hydrology and soil
23 conditions or routes to groundwater via abandoned
24 shafts. In these circumstances, a single boring

1 for a large (four to six acre) lagoon would be
2 insufficient.

3 Secondly, we recommend a prohibition on
4 the use of outlet piping through the lagoon berm.
5 Section 4.6.2 of the American Society of
6 Agricultural Engineers Guidance states "An overflow
7 device with a minimum capacity of 1.5 times the
8 peak daily inflow may be installed at the lagoon
9 surface only if the overflow is to be contained in
10 another lagoon cell or other treatment facility.
11 Outlet devices should be installed in a way that
12 allows effluent to be taken at a level 150-450
13 millimeters or 6 to 18 inches below the surface."
14 This seems to suggest that a subsurface outlet may
15 be approved. The Illinois EPA is aware of a recent
16 example in North Carolina where lagoon slope
17 failure was related to, and possibly directly
18 caused by, an outlet pipe design of this type. The
19 National Resource Conservation Service recently
20 changed the North Carolina guidance document so
21 that, and I quote, "if any pipes are to be placed
22 through the embankment, the location and method of
23 installation shall be approved by the designer of
24 the embankment...The installation shall be

1 certified by the inspector." Close quotes.

2 It should be noted that this guidance
3 document, although designated as a National
4 Resource Conservation Service document, was
5 developed specifically for and applies only to
6 North Carolina. The National Resource Conservation
7 Service document referenced in the proposal does
8 not contain this guideline. The Illinois EPA
9 recommends an addition to R97-15 that either:

10 A, prohibits the use of through the berm
11 outlet piping unless the piping discharges to
12 another lagoon or,

13 B, requires the Illinois Department of
14 Agriculture's specific approval, as called for in
15 the North Carolina example.

16 And last, we recommend a requirement for
17 an emergency spillway. The National Resource
18 Conservation Service document very clearly
19 specifies under what conditions this is to be
20 present. Lagoons having a maximum design liquid
21 level of three feet or more above natural ground
22 shall be provided with an emergency spillway or an
23 overflow pipe to prevent overtopping.

24 This is not addressed in the American

1 Society of Agricultural Engineer's document,
2 attached to the proposal filed in this proceedings,
3 therefore, a potential point of confusion exists
4 that could be corrected by adding a provision to
5 R97-15 for the design to include an emergency
6 spillway.

7 In conclusion, the Illinois EPA, acting
8 in its role through the Livestock Management
9 Facilities Act Advisory Committee, has evaluated
10 and made recommendations on a wide variety of
11 issues presented on the subject of livestock waste
12 management in the course of our deliberations.

13 Those on this Committee, the Department
14 of Public Health, the Department of Natural
15 Resources, and in particular, the Department of
16 Agriculture, are to be commended for their efforts
17 in drafting a well reasoned set of proposed rules
18 for the Illinois PCB's consideration.

19 R97-15 represents a strong step forward
20 in the effective management and prevention of
21 pollution from large livestock facilities in
22 Illinois. We encourage the Illinois PCB to adopt
23 R97-15 and include the above noted
24 recommendations. Thank you.

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you, Mr. Warrington.

3 We will now continue with the statement
4 from the Department of Public Health. Mr.
5 Antonacci.

6 MR. ANTONACCI: Good morning. My name is
7 David Antonacci. I am Chief of the Environmental
8 Engineering Section of the Illinois Department of
9 Public Health. I have worked in environmental
10 health programs for the past 26 years.

11 I participated in the deliberations of
12 the Livestock Management Facilities Advisory
13 Committee, and the Department supports the rules as
14 proposed. Our primary concern in the development
15 of these rules was the protection of groundwater
16 and the affect it may have on drinking water
17 supplies and on water wells. We believe that the
18 requirements in that regard are both adequate and
19 responsible.

20 We endorse the remainder of the rules as
21 being most appropriate and in keeping with both the
22 letter and the spirit of the Livestock Management
23 Facilities Act. Copies of our full written
24 testimony from the Department are available.

1 We appreciate the opportunity to be
2 involved in these deliberations and thank the
3 Department of Agriculture for incorporating our
4 public health content. Thank you.

5 HEARING OFFICER LOZUK-LAWLESS: Thank
6 you, Mr. Antonacci.

7 Now we will finish the agencies with the
8 testimony from Dr. Marlin from the Department of
9 Natural Resources.

10 MR. MARLIN: Good morning. I am John
11 Marlin with the Illinois Department of Natural
12 Resources. I represent Director Brent Manning on
13 the Livestock Facilities Advisory Committee.

14 The Department of Natural Resources
15 generally supports the livestock regulation
16 proposal before us today. We realize its scope is
17 limited by constraints of the Livestock Management
18 Facilities Act. The design standards that address
19 embankment stability and design hydraulic capacity
20 are consistent with today's design standards and
21 thus adequately protect the environment and public
22 health from lagoon failure or embankment failure.
23 The proposed lagoon design standards provide a
24 reasonable level of protection to nearby aquifer

1 resources. The lagoon construction requirements
2 appear to be consistent with standard engineering
3 methods used in these type of facilities.

4 Additionally, we note that the manager
5 certification and training sections of the
6 regulations provide the Department of Agriculture
7 the opportunity to address operational matters not
8 specifically covered by the rules.

9 We do, however, propose to modify a
10 definition in the rules, and that's the definition
11 of populated area. We want the regulations to make
12 it clear that land managed for conservation or
13 recreational purposes are considered populated
14 areas as long as they meet the 50 person per week
15 visitation requirement. Additionally, we believe
16 that the boundary of such properties should be used
17 when measuring the appropriate setback distance.

18 We appreciate this opportunity to
19 participate and thank all of you for coming out
20 today.

21 HEARING OFFICER LOZUK-LAWLESS: Thank
22 you.

23 CHAIRMAN MANNING: If I might just take a
24 moment, during the testimony Representative John

1 Jones joined us. Representative, welcome.

2 REPRESENTATIVE JONES: Thank you.

3 HEARING OFFICER LOZUK-LAWLESS: Thank
4 you. At this time, then, what we would like to do
5 is continue with some questions that were prefiled
6 by the Department, or by the Illinois Farm Bureau,
7 the Illinois Beef Association and the Illinois Pork
8 Producers directed to the Department of
9 Agriculture, after which time if there are members
10 of the audience who have questions of any of the
11 four agencies you can certainly come and you will
12 approach the podium -- just raise your hand and I
13 will acknowledge you, and approach the podium and
14 state your name and any group you may represent and
15 then ask your question.

16 So, Mr. Harrington, if you would like to
17 begin. I believe you stopped at question number
18 54.

19 MR. HARRINGTON: I believe so. Good
20 morning. I think we stopped at question 54, and
21 for those in the audience, basically we were
22 starting to discuss some questions relating to
23 liner standards at that time.

24 Question 55 was with regard to the liner

1 standards in Section 506.205. You state in your
2 testimony that the synthetic liner manufacturer is
3 required to provide a certification that the liner
4 is chemically compatible with the livestock waste
5 and the supporting soil materials.

6 Is it the Department's intention that the
7 liner manufacturer will make a site visit to be
8 able to certify chemical compatibility?

9 MR. GOETSCH: No, it should not be
10 necessary for the liner manufacturer to make a
11 special site visit for such a purpose. The
12 manufacture will have representatives already on
13 site for the installation of the liner, as your
14 earlier questions at a previous hearing suggested.
15 These personnel should have the ability to evaluate
16 whether certain site-specific characteristics
17 warrant additional testing to assure chemical
18 compatibility beyond the original factory testing,
19 which in most, if not all cases, should be an
20 adequate test for such a chemical compatibility.

21 MR. HARRINGTON: Is it the Department's
22 intention that the manufacturer's certification of
23 chemical compatibility is meant to be a general
24 statement of compatibility?

1 MR. GOETSCH: Yes, it is the Department's
2 intent that the manufacturer certify the use of a
3 particular type of liner to contain livestock waste
4 as it is proposed in the system design at the
5 site.

6 MR. HARRINGTON: With regard to the
7 groundwater monitoring requirements in Section
8 506.206, are there any criteria that the Department
9 would use in order to assess whether items should
10 be added or deleted from the list of sample
11 analytes?

12 MR. GOETSCH: In including this provision
13 in the proposal the Department was anticipating
14 situations where earlier monitoring results might
15 indicate a change in analytes and would be a
16 beneficial change. In the case of no detections of
17 analytes above established background
18 concentrations for a period of time, the Department
19 envisioned the potential elimination of some
20 analytes, which would lower the cost to the
21 producer of both sample collection and analysis.
22 If subsequent detections were made other analytes
23 could then be added back to the list.

24 In the case of early monitoring results

1 indicating possible releases from the lagoon, a
2 change in the tester requirements, such as the
3 addition of certain bacteriological testing could
4 assist in determining if the detections were as a
5 result of the lagoon or possibly some other
6 source. Thus, the Department suggests that sample
7 analysis history would be the major criteria
8 utilized in assessing whether modifications to the
9 analyte list would be possible in a given
10 situation.

11 MR. HARRINGTON: Do I properly understand
12 your answer to be that based on the initial
13 analysis and subsequent analysis that the
14 Department could both add and subtract from the
15 list of constituents to be analyzed for?

16 MR. GOETSCH: Yes.

17 MR. HARRINGTON: Would there be any
18 reason not to restrict the Department to a list of
19 potential analytes that has been reviewed and
20 promulgated as part of the regulations?

21 MR. GOETSCH: As noted in the previous
22 answer, there may be some cases where the addition
23 of analysis beyond those listed in 506.206 (e)
24 would be of assistance to both the producer and the

1 Department. However, the list included in this
2 section would certainly be sufficient for the vast
3 majority of cases. Thus, no expansion beyond the
4 list included in the Department's proposal is
5 suggested for initial use.

6 PRESIDING BOARD MEMBER FLEMAL: Mr.
7 Harrington, if I might, just for a moment, as long
8 as we have got a train of thought here, I think
9 there is a question that the Board has had that
10 might be useful to ask at this time.

11 In the Subsection E of 506.206, which is
12 the sampling procedure you are talking about, there
13 is a passive voice construction. It says, the
14 sample shall be collected and analyzed. Is it the
15 Department's intention that that is the owner and
16 operator who is responsible for that activity?

17 MR. GOETSCH: (Nodded head up and down.)

18 PRESIDING BOARD MEMBER FLEMAL: But then
19 it follows later that the Department may collect
20 and analyze. Is that a request on your part to
21 have an independent ability to go in and collect
22 your own sample and do your own analysis?

23 MR. GOETSCH: Yes.

24 PRESIDING BOARD MEMBER FLEMAL: Okay.

1 Thank you.

2 PRESIDING BOARD MEMBER FLEMAL: At the
3 Department's cost, presumably, if the Department is
4 in engaged in that activity?

5 MR. GOETSCH: Yes.

6 PRESIDING BOARD MEMBER FLEMAL: Okay.
7 Thank you.

8 HEARING OFFICER LOZUK-LAWLESS: Thank
9 you.

10 MR. HARRINGTON: With regard to the
11 Department's ability to require changes to the
12 design, construction or operation of the lagoon, is
13 there any reason that the Department did not
14 consider including a negotiated compliance
15 agreement as part of this requirement?

16 MR. GOETSCH: The Department anticipates
17 that there will certainly be discussions with the
18 owner or operator of a lagoon in cases where
19 changes in the design, the construction and
20 operation of the lagoon are necessary for
21 compliance. However, the statute under 510 ILCS
22 77/15 (f) provides adequate authority to the
23 Department to ensure compliance. Thus, additional
24 formulization of the compliance process was not

1 included in the proposal.

2 MR. HARRINGTON: Question 61, is there
3 any statutory authority for the Department to
4 consider, quote, "the failure of the owner or
5 operator to submit required information shall be
6 considered a failure to construct a lagoon in
7 accordance with the requirement of this subpart."

8 That is, under what statutory authority
9 can the Department state that a failure to meet an
10 operational standard will be considered to be a
11 violation of a construction standard?

12 MR. GOETSCH: The Department assumes that
13 the information submission referenced here is
14 associated with the groundwater monitoring required
15 of facilities located within areas classified under
16 the site investigation as being highly susceptible
17 to groundwater contamination. The requirement to
18 install the monitoring wells, collect quarterly
19 samples, analyze the samples for the presence of
20 various analytes and report the results to the
21 Department are all integral components of the
22 overall design of the lagoon, just as the
23 installation and maintenance of a liner would be an
24 integral component of the design.

1 The failure of an operator or owner to
2 submit the required data must then be considered as
3 a failure of the owner or operator to complete the
4 lagoon as it was registered. Thus, the Department
5 deems a failure to submit the required information
6 as a failure to, quote, "construct the lagoon in
7 accordance with the requirements of this part," end
8 quote.

9 MR. HARRINGTON: Question 62, with regard
10 to Section 506.206 (h), does the Department know of
11 any way to demonstrate that deviations from the
12 standards shall be at least as protective of the
13 groundwater prior to the installation of the
14 livestock waste management facility? Can such
15 demonstrations be made through design values rather
16 than through actual on-site demonstrations?

17 MR. GOETSCH: The Department believes
18 that these provisions were included in the statute
19 and were, in turn, included in the rule proposal to
20 allow for the development and implementation of new
21 technologies and designs. The Department
22 anticipates that all deviations will be proposed to
23 the Department prior to full scale implementation
24 in the field and expect that such proposals will

1 include both data and calculations as well as
2 demonstrations, many of which could very well be
3 developed through university based research. The
4 proposed approach is similar to the experimental
5 permit and innovative design components of the
6 department administered agrichemical facility
7 containment program found at 8 Illinois
8 Administrative Code 255.50 and 255.60.

9 MR. HARRINGTON: Let me see if I
10 understand. In other words, the demonstration
11 could be based on both the field data and
12 scientific data that is reliable?

13 MR. GOETSCH: Yes, that's true.

14 MR. HARRINGTON: Thank you. With regard
15 to closure in Section 506.209 (a)(1)(b) does the
16 Department intend that a closed lagoon be returned
17 to its exact preconstruction condition or is there
18 some flexibility in this rule?

19 MR. GOETSCH: The Department's proposal
20 is based on the statutory language in 415 ILCS 15
21 (e). The Department intends there to be some
22 flexibility with regard to returning the lagoon to
23 its, quote, "exact preconstruction condition,"
24 unquote, as long as all potential environmental

1 hazards have been appropriately addressed during
2 that closure activity.

3 MR. HARRINGTON: Thank you. Turning to
4 the Subpart C, the waste management plan, with
5 regard to Section 506.301, both your testimony and
6 Section 20 (f) of the Act provide that the
7 application cannot exceed, quote, "the agronomic
8 nitrogen demand of the crops to be grown averaged
9 over a five year period," close quote. It seems
10 that proposed Section 506.301 requires that the,
11 quote, "application rates not exceed the agronomic
12 nitrogen requirement for the crop to be grown
13 during the growing season."

14 Should not the regulation follow the
15 language of the Act and your testimony by stating
16 that the application rate cannot, quote, "exceed
17 the agronomic nitrogen demand of the crops to be
18 grown averaged over a five year period"?

19 MR. SCOTT FRANK: The Department
20 interpreted the statutory language to mean that the
21 nitrogen requirements of the individual crops grown
22 over a five year period would be averaged by type
23 of crop to obtain a value to use for crops to be
24 grown in the future. And that these nitrogen

1 requirements are to be based on yield. 35 Illinois
2 Administrative Code 560 Section 201 (a) addresses
3 nutrient loading.

4 It states that livestock waste
5 application should not exceed the agronomic
6 nitrogen rate, which is defined as an annual
7 application rate of nitrogen that can be expected
8 to be required for reasonable anticipated crop
9 yield. The Department believes that using past
10 yield information is a good way to predict a
11 reasonable anticipated crop yield.

12 The rules for the waste management plan
13 have been developed such that the amount of
14 livestock waste to be applied for each individual
15 crop is to be calculated. Different crops have
16 different nitrogen requirements for optimal growth
17 and development.

18 MR. HARRINGTON: Let me see if I
19 understand this a little better. There is nitrogen
20 carry over from year-to-year, is there not,
21 typically in fields?

22 MR. SCOTT FRANK: There can be.

23 MR. HARRINGTON: And, thus, nitrogen not
24 used one year is then available and can be

1 calculated in what would be needed for the next
2 year?

3 MR. SCOTT FRANK: Depending upon the form
4 of nitrogen that's carried over.

5 MR. HARRINGTON: So if the application
6 rates are geared to the five year average nitrogen
7 requirements of the crops, would not that protect
8 the environment from the possible harm that you are
9 aiming at?

10 MR. SCOTT FRANK: Could you repeat that?

11 MR. HARRINGTON: Let me see if I can
12 state it a little better. I think as we have read
13 the rule, we thought the intention is that the
14 nitrogen demand of the crops would be averaged over
15 five years and that you would be able to apply
16 nitrogen based on that average. Are you saying
17 that is not correct?

18 MR. SCOTT FRANK: No, I am not. You have
19 to have some baseline to determine what the
20 nitrogen demand for those crops should be, and as
21 is stated in the emergency rules, the purpose would
22 be to use past crop history to determine what
23 yields could be attained in the future and
24 fertilize then based on the yields that could be

1 attained.

2 MR. HARRINGTON: Does that not suggest
3 that there would be no ability with new
4 agricultural techniques, new hybrids, to increase
5 crop yields significantly?

6 MR. SCOTT FRANK: No, I don't think it is
7 limiting in that sense because this average can
8 change. We basically every year as you get another
9 year of crop data, you could recalculate that
10 average.

11 MR. HARRINGTON: So you would be limited
12 by the past five years demand even though you
13 brought in a new hybrid that would require
14 significantly more nitrogen and would consume that
15 nitrogen and produce a significantly larger crop?

16 MR. SCOTT FRANK: I don't know if the
17 increases in crop yields due to different genetics
18 would be that great from year-to-year. Normally we
19 see small incremental increases in yield over
20 time. So to get a very great increase in yield
21 over one year based on genetics of the crop is
22 probably not a great occurrence. The environment
23 plays much more of a larger role in determining
24 crop yields.

1 MR. HARRINGTON: If someone is switching
2 from chemical fertilizer, which they have to pay
3 for on the market, to manure application, which
4 presumably they have on the farm, is there not a
5 basis for using substantially higher rates of
6 application to produce an economic crop, since the
7 fertilizer is essentially free to them at this
8 point?

9 If I am not making myself clear, I will
10 try and rephrase the question.

11 MR. SCOTT FRANK: Yes, if you could
12 rephrase it, please.

13 MR. HARRINGTON: When crop yields are
14 calculated or planned, as I understand it, and I am
15 no expert, one of the factors that goes into it is
16 the expected price the crop will bring, the cost of
17 the inputs, the fertilizer and pesticides and
18 herbicides and the labor that goes into the crop to
19 determine what would be an economic production for
20 a given year. Do you agree with that?

21 MR. SCOTT FRANK: Regardless of the cost
22 of the inputs that go into it, you know, there is
23 still some type of a yield level there that is
24 probably realistically achievable.

1 MR. HARRINGTON: I think we are missing
2 each other here a little bit. I apologize. I am
3 sure it is my questions.

4 If the five year history has been based
5 on low input because of the cost of the fertilizer,
6 and this year they are going to use a natural
7 fertilizer, such as animal manure to provide the
8 nitrogen, and they have an adequate supply of it,
9 and they are willing to put much higher nitrogen
10 loads and produce a higher crop, is that allowed in
11 your rules as you propose them?

12 MR. SCOTT FRANK: There are different
13 ways that yields can be determined in here. One is
14 past yielding ability. Another one is through the
15 use of the yield information that the Farm Service
16 Agency has or some crop insurance yields, if that
17 was the case. Also, there is the fallback
18 position, as stated in the rules, that the soil
19 based yield data could be used to calculate yields.

20 MR. HARRINGTON: So not only the average,
21 but using proper scientific data and proper
22 agronomic analysis one could project a higher yield
23 for a given year and then use a higher amount of
24 fertilizer, natural fertilizer for that year if it

1 is supported by the scientific data; am I correct?

2 MR. SCOTT FRANK: Yes.

3 MR. HARRINGTON: Thank you. With regard
4 to Section 506.302 (c) (2), this section requires
5 that the owner or operator certify that the waste
6 management plan has been prepared. Is there any
7 need for this in light of the fact that the plan
8 must be kept available for inspection during normal
9 business hours?

10 MR. SCOTT FRANK: The purpose of the
11 certification of the waste management plan
12 preparation is to aid the Department in determining
13 facilities that are required to prepare a plan.
14 There is no permitting process for the construction
15 or operation of livestock facilities, and the
16 registration process only applies to facilities
17 constructing or modifying a lagoon.

18 The certified livestock manager program
19 will generate a list of managers for facilities of
20 300 animal units or more. However, a certified
21 manager may be the manager at more than one
22 facility. This plan preparation certification will
23 allow the Department to be more efficient if waste
24 management plan inspections are performed.

1 MR. HARRINGTON: Going on, question 67,
2 with respect to Section 506.303 (c), what is the
3 reason for including, quote, "directions from the
4 nearest post office," close quotes, since the
5 closest post office may have no relationship to the
6 location of the facility or the land where the
7 waste is applied?

8 MR. SCOTT FRANK: This language was
9 included to provide information to aid Department
10 personnel in locating facilities should an
11 inspection of waste disposal records be performed.

12 MR. HARRINGTON: Would an exact
13 description of the location of the facility be more
14 helpful?

15 MR. SCOTT FRANK: What do you mean by
16 exact description of the facility?

17 MR. HARRINGTON: Well, as I have been
18 driving through Illinois, if you designate the
19 street, the road, route number, the location of the
20 farm on that route, perhaps by mile post, does not
21 that give you a better location than trying to
22 calculate the distance, I suppose, as the crow
23 flies from the nearest post office?

24 MR. SCOTT FRANK: No, the intent was not

1 as the crow flies. It was basically as you had
2 indicated, X number of miles in one direction and
3 turning at mile post number whatever, and X number
4 of miles in the other -- in the subsequent
5 direction. So using the mile post that you had
6 indicated may be very similar to the language that
7 we have in the rule. The use of the words post
8 office was just to give a baseline as a place to
9 start.

10 MR. HARRINGTON: I would ask the
11 Department to consider, and they can answer this
12 now or later, as to whether there might be more
13 flexibility built into the rule on that point.

14 MR. BORUFF: I would like to respond to
15 that question.

16 We will consider adding or maybe
17 suggesting that that be taken out of the rule or
18 modifying it in some way. Although, from a
19 personal background, as one who has made a great
20 part of his living in past years driving through
21 the backroads and byways of Illinois, one of the
22 things that is difficult from county to county is
23 that road numbering systems are not always
24 consistent from one county to the next.

1 I have worked in some counties of
2 Illinois who have their postal delivery from
3 actually other states, and have an address from
4 another state, even though there is a post office
5 located in Illinois closer to their home. But due
6 to the lack of either a rural route or rural
7 delivery of any nature from that post office, they
8 don't even get it from their closest post office.

9 We felt that as a way of allowing for
10 efficient travel on behalf of our inspectors, that
11 generally one of the consistent landmarks from one
12 community to the next is the United States Post
13 Office. We anticipated that the description of how
14 to get from that post office to an individual farm
15 could be relatively simple in the manner in which
16 Mr. Frank outlined by saying X number of miles one
17 direction, and then X number of miles another from
18 that facility.

19 I think it was meant simply as a way of
20 simplifying directions so it would allow our
21 inspectors an efficient use of travel time to get
22 to the facility in question. But we will, as the
23 Department, consider that as you have asked.

24 MR. HARRINGTON: Thank you. Question 68,

1 with respect to Section 506.303 (i), is the
2 cropping schedule, as listed in the waste
3 management plan, meant to be flexible?

4 MR. SCOTT FRANK: The cropping schedule
5 as described in 303 (i) is intended to be flexible
6 as far as determining crops to be grown in the
7 future. The crops grown in the past year would be
8 known and would be used to determine any nitrogen
9 credits. The crop to be grown in the current year
10 should be used to determine the livestock waste
11 application rate for that crop. The listing of
12 crops for the next two years could be used for
13 planning purposes, so if a cropping change occurs
14 which alters the amount of livestock waste that can
15 be applied the owner or operator would be aware
16 that additional land may be required to apply that
17 waste.

18 When a plan is prepared listing the crops
19 for the two years following the current year and
20 the schedule is followed for those years, the plan
21 may not have to be changed for those years if the
22 application rate, method of application, and the
23 land for application does not change. If a change
24 is made in the cropping sequence which will affect

1 the amount of waste that can be applied, the waste
2 management plan will have to be updated.

3 MR. HARRINGTON: With respect to the
4 current year's crop, as I understand it, there are
5 very often weather conditions that might result in
6 a change in a crop even after the manure has been
7 applied to the field. For example, if it has been
8 applied during the winter with the plan of
9 producing corn and then the spring is so wet the
10 corn can't be planted, soybeans might be put in the
11 field, I would assume that would not be considered
12 a violation of any of these rules, would it?

13 MR. SCOTT FRANK: No. There is a
14 provision in the penalties section that states that
15 any cropping changes due to unforeseen weather
16 occurrences would not be subject to penalties.

17 MR. HARRINGTON: What about a cropping
18 change as a result of extreme changes in demand for
19 various products? If the price of corn plummets
20 and the price of soybeans is going up, I know the
21 people can sometimes switch crops. Would that be
22 prohibited?

23 MR. SCOTT FRANK: Depending on the crop
24 that is to be grown, the way that the plan is

1 being -- the way the nitrogen requirements for the
2 crops are being put together, if soybeans are
3 substituted for corn that would not affect the
4 nitrogen application, because even though soybeans
5 are legumes and fix their own, it will be proposed
6 that soybeans can be fertilized at the same rate as
7 corn. So those rates could be the same. Also, in
8 the penalty section that I referenced earlier,
9 there is additional language that states not only
10 due to weather conditions, but other unforeseen
11 changes. That is in Subpart E.

12 MR. HARRINGTON: So language which would
13 say in terms of future years and even this year's
14 crop that we are looking for as the anticipated
15 crops for the year shouldn't be a problem, would
16 it?

17 Would you like for her to read that back?

18 MR. SCOTT FRANK: Yes, please.

19 (Whereupon the requested
20 portion of the record was read
21 back by the Reporter.)

22 MR. HARRINGTON: If you would like to
23 maybe consider that, we could come back to it at
24 another point.

1 Modifying question 71 a little, what does
2 the Department mean by the term optimum crop yield,
3 as used in 506.303 (j)?

4 MR. SCOTT FRANK: Optimum is defined as
5 the most favorable or greatest degree attained
6 under specified conditions. In the case of crop
7 yields, the specified conditions would be the soil
8 in the field, the weather conditions, and the
9 management for that particular growing season.
10 Weather conditions can greatly -- excuse me --
11 weather conditions can vary greatly, which can have
12 a direct affect on yield.

13 Yield averaging is used to counteract the
14 changing weather conditions from year-to-year.
15 Yield data from years with crop disasters can be
16 discarded to achieve a more favorable condition.
17 As used in Section 506.307, the optimum crop yield
18 is to be determined based on actual yields, which
19 is the measure of production for the particular
20 fields that are to receive livestock waste.

21 MR. HARRINGTON: Are you familiar with
22 the term targeted yield?

23 MR. SCOTT FRANK: In what respect?

24 MR. HARRINGTON: That in planting a crop

1 for a given year there is a target yield calculated
2 which takes into account all the economic inputs
3 and the expected economic return?

4 MR. SCOTT FRANK: I am vaguely familiar
5 with that. I don't have a lot of knowledge on
6 that.

7 MR. HARRINGTON: Have you heard optimum
8 crop yield defined as the largest single crop that
9 could be produced from a field in a given year
10 regardless of economics, a theoretical maximum?

11 MR. SCOTT FRANK: I have not heard that.

12 MR. HARRINGTON: In considering the
13 standards to be used in these particular
14 subsections, did the Department refer to the
15 standards governing nutrient loading, agronomic
16 fertilization rates, and the approximate nutrient
17 content of waste from various management systems,
18 as included in 35 Illinois Administrative Code
19 560?

20 MR. SCOTT FRANK: The Department did
21 consider the content of 35 Illinois Administrative
22 Code 560. Section 560.101 (d) states that "the
23 intent of this document is to present livestock
24 waste application guidelines for the livestock

1 producers of Illinois. The guidelines must, of
2 necessity, be given in general terms and cannot
3 apply to each particular farm situation," end
4 quote.

5 Section 560.201 (a) addresses nutrient
6 loading. It states that livestock waste
7 application should not exceed the agronomic
8 nitrogen rate, which is defined as the annual
9 application rate of nitrogen that can be expected
10 to be required for a reasonable anticipated crop
11 yield. The Department believes that using past
12 yield information is a good way to predict a
13 reasonable anticipated crop yield.

14 Table 2 in Part 560, the approximate
15 nutrient content of waste from various management
16 systems, contains ranges of values for the same
17 type of system that differ by factors ranking from
18 1.2 to 10 for nitrogen content. Waste facilities
19 of the same type managed differently can contain
20 different concentrations of nutrients. The
21 approach of the proposed waste management plan
22 rules is to be facility specific. Through the
23 laboratory analysis of waste samples a much more
24 accurate estimate of the nutrient content of the

1 waste to be applied can be obtained.

2 Some data presented in Appendix A of Part
3 560, agronomic fertilization rates for various
4 Illinois crops, does not agree with the latest
5 recommendations in the Illinois Agronomy Handbook
6 or from the University of Illinois Department of
7 Agronomy staff. For the nutrient content of
8 various waste management systems, 35 Illinois
9 Administrative Code 560 lists the nitrogen content
10 for swine manure and pit storage as 30 to 55 pounds
11 per 1,000 gallons of waste.

12 The Midwest Plan Service document,
13 Livestock Waste Facilities Handbook, lists the
14 nitrogen content from the same type of storage as
15 36 pounds per 1,000 gallons of waste. This 36
16 pounds is within the part 560 range, however, the
17 Natural Resource Conservation Service of the USDA
18 handbook, Agricultural Waste Management Yield
19 Handbook, lists values ranging from 25 to 52.48
20 pounds per 1,000 gallons of waste depending on
21 whether the facility was farrow, nursery, grow,
22 finish, or breeding gestation.

23 Part 560 lists the nitrogen content in
24 poultry manure as 25 pounds per ton of dried

1 manure. The Midwest Plan Service document lists
2 values of 33 to 47 pounds of nitrogen per ton
3 depending on the type of storage and whether
4 bedding was included. The Natural Resource
5 Conservation Handbook lists the nitrogen on pounds
6 per day per 1,000 pounds of animal waste basis.

7 The point is that different sources of
8 data vary in the nutrient contents that are
9 presented. The use of book values may not be an
10 accurate indicator of the actual nutrient content
11 of the waste, and the use of book values may
12 inadvertently cause an over application of
13 nutrients.

14 MR. HARRINGTON: With respect to the same
15 subject, 506.303 (k), at present, I believe,
16 requires a statement of the nutrient content of the
17 livestock waste. Would it not be more useful to
18 require the estimated or calculated value of the
19 nutrient content of the livestock waste? That's a
20 little different than is written in the prepared
21 questions.

22 MR. SCOTT FRANK: What question is that?

23 MR. HARRINGTON: Well, basically -- with
24 the prepared question, with regard to Section 503

1 (k), does the rule intend to be flexible due to the
2 variability of the nutrient content of livestock
3 waste?

4 HEARING OFFICER LOZUK-LAWLESS: It
5 appears that Mr. Harrington has dropped down to
6 question 77.

7 MR. HARRINGTON: Yes. My apologies.

8 HEARING OFFICER LOZUK-LAWLESS: That is
9 okay. Can we assume that any questions that you do
10 skip are being withdrawn?

11 MR. HARRINGTON: Yes, or because I
12 believe that they have already been answered in the
13 previous answers.

14 HEARING OFFICER LOZUK-LAWLESS: Okay.
15 Thank you.

16 MR. HARRINGTON: There is no need to
17 repeat them. If the Department feels that there is
18 some information that they need to add from the
19 prepared answers to those questions, I would be
20 happy to have it.

21 HEARING OFFICER LOZUK-LAWLESS: Okay.

22 MR. HARRINGTON: I just don't want to be
23 duplicative.

24 HEARING OFFICER LOZUK-LAWLESS: Okay.

1 Thank you.

2 MR. SCOTT FRANK: The rule could be
3 changed to estimated nutrient content of the
4 livestock waste, since the nutrient content of the
5 waste determined by laboratory analysis is only an
6 estimate of the true nutrient content values of the
7 overall waste volume. The values of the nutrient
8 content can change from year-to-year depending on
9 management and other factors. So the proposed rule
10 states that livestock waste shall be analyzed
11 annually to determine the nutrient content of the
12 waste that is to be applied. The plan is to
13 contain the nutrient content values as determined
14 by the lab analysis. The plan may have to be
15 updated annually to reflect changes in the values
16 of nutrient content.

17 MR. HARRINGTON: With respect to the
18 annual analysis of waste to be applied, is it
19 assumed that someone will go out to the lagoon, for
20 example, at some point and take samples from the
21 lagoon?

22 MR. SCOTT FRANK: Yes.

23 MR. HARRINGTON: Is it assuming that they
24 are going to go out and agitate the lagoon so that

1 the sample is representative of the total contents
2 which might be applied?

3 MR. SCOTT FRANK: The intent of sampling
4 is to get the best representative sample that could
5 be obtained. It would depend upon how it was
6 sampled as to whether agitation could occur or not.

7 MR. HARRINGTON: Well, wouldn't agitation
8 of either the lagoon or deep pits, just for
9 purposes of the sampling, result in a significant
10 increase in odor?

11 MR. SCOTT FRANK: It would depend upon
12 how the sampling was done, but pulling out small
13 amounts of the manure from the various places
14 should not increase the odor significantly.

15 MR. HARRINGTON: So if I understand your
16 answer, the suggestion is not that the lagoon be
17 agitated or that the pit be agitated, so that one
18 sample is representative, and there would be
19 multiple samples from various locations?

20 MR. SCOTT FRANK: Yes.

21 MR. HARRINGTON: May I have just a
22 moment, please?

23 HEARING OFFICER LOZUK-LAWLESS: Yes.

24 MR. HARRINGTON: Is it contemplated that

1 the multiple samples from the lagoons or pits would
2 be combined for analysis?

3 MR. SCOTT FRANK: Yes.

4 MR. HARRINGTON: So there would be one
5 analysis of the combined samples?

6 MR. SCOTT FRANK: There could be -- there
7 would be one sample from each different type of
8 storage. So if there was one lagoon that manure
9 was being pulled out of, there could be one sample
10 from that. If there was a pit under a building,
11 there would be one sample from that, and a pit from
12 another building, a sample from that.

13 MR. HARRINGTON: Is it not possible,
14 indeed likely, that a sample of fully agitated
15 waste from a previous year would be more
16 representative than the spot sampling that you are
17 talking about?

18 MR. SCOTT FRANK: That is a possibility.
19 There is a trade-off here as far as sampling during
20 application and using those results for application
21 the next year, because there would be a year's time
22 lag there. The way the rules are proposed is that
23 sampling would occur prior to application for that
24 particular year to obtain the nutrient content.

1 MR. HARRINGTON: Some facilities apply
2 manure throughout the year; is that not correct?

3 MR. SCOTT FRANK: That's true.

4 MR. HARRINGTON: And manure values vary
5 throughout the year as much as they would from
6 year-to-year; is that not correct?

7 MR. SCOTT FRANK: I personally don't have
8 any information on that.

9 MR. HARRINGTON: Okay. Thank you. We
10 will move on.

11 MR. RAO: May I ask one question for
12 clarification?

13 You mentioned that you take one sample
14 from each, you know, different operation, whether
15 it is two storage pits and a lagoon, then you take
16 a sample from the lagoon and one from the storage
17 pit for analysis.

18 Do you think the number of samples that
19 should be analyzed should have any bearing on the
20 size of the lagoon, how many are analyzed?

21 MR. SCOTT FRANK: We are talking about a
22 composite sample made up of subsamples from
23 different areas of the lagoon to try to get an
24 estimate of the nutrient content in that lagoon.

1 So subsampling in different areas and then
2 combining those, mixing them up, and obtaining one
3 sample to send in for analysis should be adequate.

4 MR. RAO: Okay. And with regards to this
5 number of samples that you collect from the lagoon,
6 do you also get the information where those samples
7 were taken, at what depths they were taken, or it
8 is just, you know, one composite sample that you
9 get?

10 MR. SCOTT FRANK: The rule just states
11 one sample. It doesn't state anything about
12 location.

13 MR. RAO: Location or how many parts from
14 the lagoon that you need the samples of?

15 MR. SCOTT FRANK: (Shook head from side
16 to side.)

17 MR. RAO: Okay. Just one more question.
18 Are you aware of any standard protocols for
19 sampling of lagoons?

20 MR. SCOTT FRANK: I believe there are
21 some Extension Service publications outlining
22 those. I don't have anything, or I can't quote
23 anything.

24 MR. RAO: Okay.

1 PRESIDING BOARD MEMBER FLEMAL: And then
2 may I try to follow-up on that one?

3 If such exists, would it be useful to
4 refer to that standard protocol rather than kind of
5 designing our own particular protocol here?

6 MR. BORUFF: Speaking on behalf of the
7 Department, if such a reference document does
8 exist, I think that would be consistent with what
9 we have done in the past with the rules, in trying
10 not to reinvent the wheel, but rather make use of
11 good use of preexisting scientific data. So that
12 we could research that and see if, in fact, there
13 was sampling protocol that was applicable to a
14 lagoon or a livestock pit.

15 PRESIDING BOARD MEMBER FLEMAL: Thank
16 you.

17 CHAIRMAN MANNING: Following up with
18 that, then, if you determine that there is such a
19 document that exists with the Extension Service,
20 could you put that in the record?

21 MR. BORUFF: Yes, ma'am.

22 CHAIRMAN MANNING: Thank you.

23 MR. BORUFF: You are welcome.

24 MR. HARRINGTON: Question 78, with regard

1 to Section 506.303 (r), is the statement that,
2 quote, "the distance from applied livestock waste
3 to surface water is greater than 200 feet," closed
4 quote, necessary or redundant in light of the fact
5 that 506.303 (p) cites the same language from the
6 Act regarding the application of livestock waste
7 near surface water?

8 MR. SCOTT FRANK: The statement is not
9 necessary, but it does reiterate the importance of
10 maintaining a distance from these potential routes
11 of contamination.

12 MR. HARRINGTON: Slight rewording,
13 question 79, would the Department -- does the
14 Department define surface water to include standing
15 water from a rainfall event or from the application
16 of irrigation?

17 MR. SCOTT FRANK: The Livestock
18 Management Facilities Act does not have a
19 definition of surface water. However, if the
20 Pollution Control Board feels it is warranted, the
21 Department would not object to the addition of
22 language similar to that in 35 Illinois
23 Administrative Code 501.402 (a) which speaks of
24 surface waters except small temporary accumulations

1 of water occurring as a direct result of a
2 precipitation or application of waste.

3 MR. HARRINGTON: Thank you.

4 PRESIDING BOARD MEMBER FLEMAL: Mr.
5 Harrington, would you allow me an interruption
6 again?

7 MR. HARRINGTON: Certainly.

8 PRESIDING BOARD MEMBER FLEMAL: Again,
9 just to keep things all in the same place
10 ultimately in the transcript.

11 The section that we are talking about
12 here is Subsection R of 506.303, and that contains
13 a suggestion from the Department of Agriculture
14 that the statutory statement, a provision that
15 livestock waste may not be applied in waterways, be
16 qualified. There is a possibility that this might
17 be viewed as a change in a statutory provision.

18 The statute says livestock waste may not
19 be applied in waterways. How does one respond to
20 the challenge where we then say, however, certain
21 waterways in this statutory provision don't apply?
22 Let me emphasize here that I understand what this
23 is attempting to do. My concern is whether it is
24 something that is allowed, whether we have the

1 authority or the ability to put an exception on a
2 statutory provision.

3 MR. BORUFF: Thinking back -- your
4 question is a good one. In thinking back on what I
5 perceive as to be some of the legislative intent
6 that was discussed during the formulation of this
7 Act, is that legislators were always very conscious
8 of the fact to make sure that these rules did not
9 conflict with good soil and water conservation
10 measures and methods. And that one of the most
11 important components to keeping soil in place is
12 the establishment of waterways and buffer strips
13 and areas seeded by grass of that type to keep soil
14 in place and to keep it out of surface water and to
15 keep it from running off.

16 When they addressed the one issue by what
17 refers to as allowing that waterways may be
18 covered, so to speak, through the application --
19 through an irrigation system, their intent when
20 they addressed that was that should that not be
21 allowed, it might force producers with irrigators
22 to actually take those waterways out -- put them
23 into production, and take them out of being grassed
24 in order so that they could still use that existing

1 method of application.

2 I guess my concern is that in order to be
3 consistent with their interests in maintaining
4 sound soil stewardship through waterways, that we
5 not make it difficult for producers that would use
6 surface equipment that same latitude as long as the
7 material that was applied to waterway didn't run
8 off. It does speak to that, looking for the slope
9 and that kind of thing.

10 PRESIDING BOARD MEMBER FLEMAL: As I say,
11 I understand the theory behind it. I have great
12 sympathy with it. But I read this statement in its
13 bare form as saying this; livestock waste may not
14 be applied in a waterway, which is statutory. Then
15 the next sentence it says, it may be applied in
16 grass waterways. Is that a -- is the second part a
17 contradiction of the statute? Perhaps what we
18 might do is look at this and see if there is some
19 imaginative ways to accomplish the end maybe
20 without using the same words, perhaps, so that
21 there is no flag raised.

22 MR. BORUFF: Right.

23 PRESIDING BOARD MEMBER FLEMAL: Perhaps
24 it is just the position of the word waterways in

1 the two provisions that is the problem.

2 MR. BORUFF: One way we might look at
3 that is that some definition in the NRCS guidelines
4 as to a waterway might denote a depression in the
5 soil which conveys water as opposed to a grassed
6 waterway, which would be the same depression or low
7 area, but grassed as opposed to available for crop
8 production.

9 PRESIDING BOARD MEMBER FLEMAL: Okay.
10 Again, thank you, Mr. Harrington, for that
11 opportunity to pursue that matter.

12 MR. HARRINGTON: I think maybe just to
13 summarize the question is how do we define
14 waterways and how the legislature intended that
15 definition to be used; is that correct?

16 MR. BORUFF: I believe that to be the
17 case.

18 MR. HARRINGTON: So if we could clarify
19 that definition then perhaps we could solve that
20 problem.

21 Now, I believe question 80 has already
22 been answered, unless you want to add something
23 further on that.

24 MR. SCOTT FRANK: No.

1 MR. HARRINGTON: I believe the same is
2 true of 81 and 82. With respect to question 83, I
3 am going to rephrase that, but I believe is it not
4 correct that it is the Department's intent that any
5 criteria or rules that they adopt to administer
6 this program will be adopted pursuant to the
7 Illinois Administrative Procedure Act with notice
8 and comment from Illinois register?

9 MR. BORUFF: That's what we requested of
10 the Board, yes.

11 HEARING OFFICER LOZUK-LAWLESS: Mr.
12 Harrington, we --

13 CHAIRMAN MANNING: If I might interrupt
14 for just a second, I have a question, too, before
15 we leave the provisions. 506.303 (q) deals with
16 the statutory prohibition that the provision that
17 livestock waste may not be applied in a ten year
18 flood plain. We have had earlier testimony in one
19 of our hearings that no one believes that there is
20 a state designation yet of a ten year flood plain.

21 Does the Department have any evidence at
22 all or any sort of indication for us about a
23 designation of a ten year flood plain at this
24 point?

1 MR. BORUFF: No, we don't.

2 CHAIRMAN MANNING: Okay. If any of the
3 departments do, it would be interesting to have
4 that information in the record. Otherwise, I think
5 we are going to leave this record with the thought
6 that there is no ten year designated flood plains
7 in the state. Thank you.

8 HEARING OFFICER LOZUK-LAWLESS: Mr.
9 Harrington, one moment, please.

10 MR. HARRINGTON: Okay.

11 MS. TIPSORD: Mr. Boruff, in response to
12 Mr. Harrington's question, you said, I believe,
13 that is what we asked of the Board as far as
14 adoption of the rules. My basic question is are
15 you asking the Board to give you the authority to
16 adopt rules?

17 MR. BORUFF: No. I am sorry. In the
18 proposed rule there are sections there where the
19 rule here is not completely fleshed out, so to
20 speak. That term has been used before.

21 To give a little history on this, the
22 Advisory Committee made up of ourselves and the
23 other three agencies, as we were going through this
24 process, felt that there were some areas of the

1 overall rule that we were looking at in order to
2 complete the program, which by nature of their
3 level of detail or from time to time the need that
4 as needs may change those rules should be changed,
5 and to be consistent with what I believe the
6 Environmental Protection Agency has the authority
7 in other programs that they administer that what we
8 were asking of the Pollution Control Board was the
9 concurrence with our plan that the rules that we
10 have proposed to you would go through this
11 Pollution Control Board process.

12 Some of the details, some of which may be
13 simply administrative procedures from our
14 Department, others which may be rules, we would
15 like to undertake another or subsequent rulemaking
16 procedure under our authority under the
17 Administrative Procedures Act. So when I made that
18 comment it was in reference to those other
19 citations where we have in the rule where we are
20 asking the Board's concurrence with that approach.
21 That's what I meant to refer to.

22 MS. TIPSORD: Okay.

23 HEARING OFFICER LOZUK-LAWLESS: Okay.

24 Thank you.

1 MR. HARRINGTON: Referring to question
2 84, did the Department -- is there any reason why
3 the Department should not use the standards
4 governing adjustment to nitrogen availability in
5 the municipal sludge rules that have already been
6 adopted by the Pollution Control Board and set
7 forth in 35 Illinois Administrative Code 391.411?

8 MR. SCOTT FRANK: The Department proposes
9 to use the factors in Table 10-2 of the Midwest
10 Plan Service document, Livestock Waste Facilities
11 Handbook, for adjusting the nitrogen amount to
12 account for losses during land application. A
13 range is given in Table 10-2, but the Department
14 suggests using the mid point of the range for the
15 actual value. The data in the Midwest Plan Service
16 document was chosen for consistency of source since
17 other information from that document is proposed to
18 be used. The Midwest Plan Service document was
19 written specifically for livestock waste.

20 MR. HARRINGTON: I am going to skip down
21 essentially to question 90, but I will rephrase it
22 in light of some of your previous questions.

23 Is it the intent, then, that losses
24 during transport and application of the waste be

1 taken into account in calculating the nitrogen
2 applied to the fields?

3 MR. SCOTT FRANK: Yes.

4 MR. HARRINGTON: With respect to
5 section -- this is question 92 -- with regard to
6 Section 506.311, you stated in your testimony that
7 quote, "the owner or operator of the livestock
8 management facility shall be notified by the
9 Department within 30 working days of the receipt of
10 the plan that the plan has been approved or that
11 further information or changes are needed," closed
12 quote. What happens if the Department does not
13 provide notice within 30 days?

14 MR. SCOTT FRANK: The owner or operator
15 shall consider the plan to be approved if the
16 Department does not notify the owner or operator
17 within 30 working days from receipt of the plan by
18 the Department.

19 MR. HARRINGTON: I am going to rephrase
20 question 93 slightly. It may not affect your
21 answer. But how does the Department propose to
22 determine the accuracy of the plan contents?

23 MR. SCOTT FRANK: A plan can be complete,
24 that is, contain all the necessary items without

1 being accurate. Accuracy was referring to the
2 proper use of the values and the correctness of the
3 calculation in the plan and not to the accuracy of
4 implementing the plan.

5 MR. HARRINGTON: So basically this is a
6 paper review of the plan to see whether it used
7 appropriate sources of information and used those
8 correctly?

9 MR. SCOTT FRANK: Yes, for the plans that
10 are to be approved by the Department.

11 MR. HARRINGTON: And that doesn't
12 contemplate a field inspection or actually of the
13 plan itself, I mean, of the rechecking the data in
14 the field?

15 MR. SCOTT FRANK: Yes, it could, to
16 determine the accuracy of the calculations.

17 MR. HARRINGTON: Skipping 94 --

18 PRESIDING BOARD MEMBER FLEMAL: Mr.
19 Harrington, if I might one more time?

20 MR. HARRINGTON: Sure.

21 PRESIDING BOARD MEMBER FLEMAL: As
22 regards to 506.311, we heard testimony at the
23 Galesburg hearing which recommended that we replace
24 nitrogen by phosphorus in terms of the approval of

1 the management plans. The Board would appreciate
2 the comment of any interested person, certainly the
3 Department, the Farm Bureau, pork producers, beef
4 producers, if they would so wish, or any other
5 persons, as a matter of fact, on the
6 appropriateness of that substitution, and have that
7 comment, of course, prior to the close of the
8 record.

9 MR. BORUFF: Okay.

10 MR. HARRINGTON: For the time being I am
11 going to skip to 98. I think the intervening
12 questions were probably answered, but I reserve the
13 right to come back --

14 HEARING OFFICER LOZUK-LAWLESS: Okay.

15 MR. HARRINGTON: -- if others don't agree
16 with me.

17 Is there any reason -- this is question
18 98. Is there any reason why the Department did not
19 follow the statements regarding updates of the
20 waste management plan as stated in the Livestock
21 Management Facilities Act at 20 (d)?

22 MR. SCOTT FRANK: Section 20 (d) of the
23 Livestock Management Facilities Act states
24 conditions of when a plan shall be updated for

1 facilities of 7,000 animal units or greater. The
2 Act does not state that these same conditions
3 cannot be applied to facilities of 1,000 or greater
4 but less than 7,000. The view of the Department is
5 that an up-to-date plan should be maintained at all
6 times.

7 MR. HARRINGTON: Is it the intent to
8 require an update when there is a significant
9 change in the plan in the underlying data or any
10 change which might occur?

11 MR. SCOTT FRANK: The definition of
12 significant could be up for discussion. The way
13 the rules read is if there is a change in certain
14 items listed in the rules then the plan would have
15 to be updated.

16 BOARD MEMBER GIRARD: Could I ask a
17 question along those lines? We are looking at
18 Section 506.313 (b) and the four points you have
19 there are essentially your definition of
20 significant; is that correct? Those are the
21 significant changes you are talking about?

22 MR. SCOTT FRANK: Yes.

23 BOARD MEMBER GIRARD: An additional
24 question would be how much time would you expect a

1 farm manager to have to make that change to the
2 plan if one of these events occurred? Do they have
3 30 days, 60 days?

4 MR. SCOTT FRANK: The way the rules read
5 is that the plan shall be reviewed annually and the
6 best time to review this may be during the time
7 prior to application when lab results are obtained
8 and that way other changes could be incorporated
9 into the plan at the same time. If other changes
10 occur throughout the year that may change some of
11 these things, and they should be incorporated at
12 that time.

13 BOARD MEMBER GIRARD: But you would still
14 expect to give the farm manager a few days to
15 revise the plan?

16 MR. SCOTT FRANK: Yes.

17 BOARD MEMBER GIRARD: Is that correct?
18 So maybe 30 days would be a reasonable amount of
19 time?

20 MR. SCOTT FRANK: Yes, it might be.

21 BOARD MEMBER GIRARD: Thank you.

22 MR. HARRINGTON: Let me follow-up.
23 Looking at 506.313 (b) (1), it says a change in the
24 amount of land area needed to dispose of the

1 livestock waste based upon a change in the waste
2 volume to be disposed of. If there is a reduction
3 in the waste volume by ten percent and, therefore,
4 ten percent less land is necessary, must the plan
5 be revised?

6 MR. SCOTT FRANK: In that case, no, it
7 would not have to be.

8 MR. HARRINGTON: All right. If the
9 nitrogen content of the livestock waste varies
10 slightly from the time the sample is taken to the
11 time it is being applied, does that require
12 revision in the plan?

13 MR. SCOTT FRANK: If that would change
14 the number of acres for application it may.

15 MR. HARRINGTON: If it reduces the number
16 of acres would it require modification?

17 MR. SCOTT FRANK: No.

18 MR. HARRINGTON: If it increases the
19 number of acres but no more than were actually
20 included in the plan in the first place, in other
21 words, the livestock waste may be spread over a
22 wider area than is actually needed, in some
23 circumstances, and if more waste is present or
24 higher nitrogen values are present, that land is

1 perfectly suited to receive it, does that require
2 modification of the plan?

3 MR. SCOTT FRANK: If the land is not
4 included in the plan then the plan would have to be
5 modified. If the land was included in the plan, as
6 extra area for application, then it would not as
7 long as that maximum rate was not exceeded.

8 MR. HARRINGTON: So the plan could
9 include land that is not actually intended for
10 application during the year as a reserve in case it
11 is needed?

12 MR. SCOTT FRANK: Yes.

13 MR. HARRINGTON: Then no modification
14 would be required if that land was used?

15 MR. SCOTT FRANK: Correct.

16 MR. HARRINGTON: It says a change of the
17 nitrogen content of the livestock waste. How is
18 that to be determined, that there is a change in
19 the nitrogen content of the waste?

20 MR. SCOTT FRANK: Through the laboratory
21 analysis.

22 MR. HARRINGTON: If you do the one
23 analysis and that's included in your plan, are you
24 supposed to make some ongoing analysis to determine

1 the waste remains the same as when you did your
2 representative analysis at the beginning of the
3 year?

4 MR. SCOTT FRANK: The way the plan is set
5 up is that waste is to be analyzed each year prior
6 to application. If there is a change in the
7 nitrogen content of that waste then the plan -- the
8 calculations would have to be redone in the plan in
9 order to determine if additional land is needed or
10 not.

11 MR. HARRINGTON: So that would be done
12 once at the time the analysis was done?

13 MR. SCOTT FRANK: That would be done
14 after the analysis is received.

15 HEARING OFFICER LOZUK-LAWLESS: Mr.
16 Harrington, are you going to go on to Subpart D now
17 or do you still have remaining questions?

18 MR. HARRINGTON: I have a couple of
19 questions on this.

20 HEARING OFFICER LOZUK-LAWLESS: Okay.
21 That's fine.

22 MR. HARRINGTON: Can you explain to me
23 what the words or other factors at the end of (b)
24 (1) refers to?

1 MR. SCOTT FRANK: If the particular
2 fields change, the number of acres may not change.
3 However, the particular fields for application
4 change, and that could be another factor.

5 MR. HARRINGTON: I guess what I am trying
6 to get at is if the farmer is sitting there reading
7 this and wants to know when he has to change his
8 plan, how does he know what other factors are?

9 MR. BORUFF: One of the things that I
10 might suggest is that there be a number of factors
11 taken into consideration as one is developing a
12 plan. And if one of those factors changes, which
13 causes you to modify your plan, then it is a factor
14 that needs to be addressed when that change
15 occurs. There are a number of different factors
16 taken into account to make sure that the plan that
17 is in place is reflective of your current agronomic
18 practices and the waste that you have available.

19 MR. HARRINGTON: So essentially if it is
20 a factor which could be recognized as requiring a
21 change in the plan, or would have been taken into
22 account in doing the plan, then that's what other
23 factors means here?

24 MR. BORUFF: I believe that's right.

1 That if by nature of the fact that it affects the
2 outcome or the development of the plan then it is a
3 factor.

4 MR. HARRINGTON: I believe I am prepared
5 to go on to the next section now.

6 HEARING OFFICER LOZUK-LAWLESS: Thank
7 you, Mr. Harrington.

8 We would like to take a ten-minute break
9 then.

10 (Whereupon a short recess was
11 taken.)

12 HEARING OFFICER LOZUK-LAWLESS: Okay.
13 Back on the record.

14 Mr. Harrington, would you like to
15 continue with your questions?

16 MR. HARRINGTON: Subpart D, certified
17 livestock manager, question 99, Section 506.401,
18 with regard to the fact that the managers must be
19 physically present at the livestock waste handling
20 facility within one hour of notification. What are
21 the circumstances in which the physical presence
22 would be necessary rather than telecommunication?

23 MR. GOETSCH: The Department believes
24 that it would be advantageous for the certified

1 livestock manager to be physically present at a
2 site at various times. For example, during manure
3 sampling and during the early stages of lagoon
4 unloading and waste application when equipment is
5 initially operated and calibrated after long
6 periods of non use, the guidance and oversight of
7 the certified livestock manager would be greatly
8 enhanced by his or her physical presence.

9 Also, the Department does not believe
10 that the requirement to be available by means of
11 telecommunication and physically present within one
12 hour is overly restrictive. Discussions with
13 producers throughout the state suggest that most,
14 if not all facility managers, intend to have
15 numerous employees certified as managers. Thus,
16 the physically present within one hour criteria
17 will become less burdensome, if at all, as the
18 program is established and testing and training
19 sessions are offered.

20 MR. HARRINGTON: Skipping 100, which I
21 believe you have already answered, is there any
22 reason -- going to 101 -- is there any reason why
23 the progressive step-by-step penalties provided for
24 in Section 30 (g) of the Livestock Management

1 Facilities Act was not included in Subpart D of the
2 proposed rule?

3 MR. GOETSCH: The Department did not see
4 any need to add any clarification or additional
5 information relative to the penalty provisions of
6 the statute, thus, it was simply not reproduced in
7 the rule.

8 MR. HARRINGTON: So it would be
9 applicable; is that your understanding?

10 MR. GOETSCH: Yes.

11 MR. HARRINGTON: Thank you. Is the
12 livestock manager program primarily an education
13 program or do you view it more as a licensing or
14 permitting system?

15 MR. GOETSCH: I believe the Department
16 views the program as a combination of an
17 educational program to allow for the appropriate
18 dissemination of new information as it becomes
19 available and as a licensing program that -- or a
20 certification program that provides credentials, if
21 you will, or allows for people a method to
22 demonstrate their competency in the areas of
23 livestock management.

24 MR. HARRINGTON: I am going to skip down

1 to Subpart G, setbacks, question 107. Does the
2 Department consider the impact of proposed rules on
3 a producer would not be allowed to rebuild after
4 natural catastrophe because the original setback
5 restrictions have been altered or that the producer
6 is in a designated agricultural area under the
7 Agricultural Areas Act?

8 MR. BORUFF: The Department believes that
9 this situation is adequately addressed by language
10 contained in the existing subtitle E regulations.
11 Thus, the Department would not oppose the addition
12 of language similar to that which is found in 35
13 Illinois Administrative Code 501.402 (c) (2) as
14 follows. I will quote from that code for you.
15 "Commencement of operations at a facility
16 reconstructed after partial or total destruction
17 due to natural causes, such as tornado, fire or
18 earthquake shall not be considered the location of
19 a new livestock management or waste handling
20 facility for setback purposes."

21 MR. HARRINGTON: Thank you. Could that
22 apply to flood as well?

23 MR. BORUFF: Yes. Flooding, I don't
24 believe, is in the quote that I cited, but I think

1 it would be viewed as a natural occurrence as well.

2 MR. HARRINGTON: Thank you. Question
3 108. What is the Department's view on its
4 authority to issue cease and desist orders for
5 questions of compliance with setback standards?

6 MR. BORUFF: The Department will follow
7 the Illinois Administrative Procedure Act's former
8 rulemaking procedures to establish those procedures
9 for issuing a cease and desist order in response to
10 the violation of the Act's setbacks provisions.
11 Under other programs, regulatory programs, which
12 our Department administers, we do have the
13 authority to issue penalties of that nature.

14 MR. HARRINGTON: In issuing those
15 penalties do you follow the adjudicatory hearing
16 procedures set forth in the Administrative
17 Procedure Act?

18 MR. BORUFF: Yes, we do.

19 MR. HARRINGTON: Would that be the
20 contemplation here?

21 MR. BORUFF: That's what we intend, yes.

22 MR. HARRINGTON: If I may have a moment,
23 I think that concludes my questions.

24 HEARING OFFICER LOZUK-LAWLESS: Yes.

1 MR. HARRINGTON: That concludes our
2 questions of the Department. Thank you very much.

3 HEARING OFFICER LOZUK-LAWLESS: Thank
4 you, Mr. Harrington.

5 MR. HARRINGTON: Thank you to the
6 Department.

7 MR. BORUFF: Thank you.

8 CHAIRMAN MANNING: Mr. Harrington, you
9 skipped your question on Subpart F, and I was going
10 to ask a question on Subpart F, so I think I will
11 do that now.

12 It is the financial responsibility
13 section, obviously. I was going to ask the
14 Department of Agriculture, the statute reads that
15 the Department shall conduct the study of the
16 availability and the cost of commercial surety
17 instruments and report its findings to the General
18 Assembly for its consideration and review.

19 It would be really helpful if the Board
20 could have a copy of that report prior to the close
21 of these hearings.

22 MR. BORUFF: Yes, we will make that
23 available to you.

24 CHAIRMAN MANNING: Okay. Thank you.

1 MR. BORUFF: Thank you.

2 PRESIDING BOARD MEMBER FLEMAL: Another
3 question, if I may, regarding some of the last
4 portions of the proposal, specifically that part
5 with respect to the setbacks.

6 As you have framed your proposal, you
7 make citation back to the Livestock Facilities
8 Management Act for the text of the setbacks. Do
9 you have any thoughts on the merits or otherwise of
10 actually including that statutory language here
11 within the Subtitle 35 so that someone could look
12 at Subtitle 35 and find the full set of setback
13 requirements?

14 MR. BORUFF: I don't see a problem with
15 our doing that, and I think it would be consistent
16 with what we had hoped all along, is that all these
17 rules would be easily available to producers as
18 they are considering that. So if that procedurally
19 is possible, I don't think that we would have a
20 problem with that.

21 PRESIDING BOARD MEMBER FLEMAL: It seems
22 to me that one possibility might be in your
23 Subsection A where as proposed you have suggested
24 in the applicability statement a one-line statement

1 that says all new livestock waste handling
2 facilities shall comply with the setback distances
3 as established and cited in the Act. We could
4 perhaps follow with something, a statement like as
5 follows, and then repeat all the statutory language
6 there.

7 MR. BORUFF: Okay. If we could review
8 that, but at this point in time I don't think that
9 would be a problem from our point, or our
10 standpoint.

11 MR. RAO: I have a follow-up on that.
12 Under the part of the regulation under Subpart C,
13 Section 506.302, under the scope and applicability
14 for waste management plan, you say a waste
15 management plan should be prepared according to the
16 requirements contained in Section 20 of the
17 Livestock Management Facilities Act.

18 Are those requirements reflected in the
19 proposed rules or are they additional
20 requirements?

21 MR. SCOTT FRANK: Almost all of the
22 requirements that are in Section 20 of the Act are
23 listed in the rule. I would have to sit down and
24 compare to see if everything is, but most of the

1 contents of the Act are in the rule.

2 MR. RAO: Okay. I just wanted a
3 clarification.

4 MR. FEINEN: I have one quick question
5 that goes along with -- and maybe you want some
6 time to think about this one. It goes along with
7 the question that Mr. Harrington had dealing with
8 natural disasters and the language you quote from
9 501.402.

10 Would that also apply to the non-farm
11 residence if it was destroyed and whether or not it
12 should be built in the setback requirements and
13 measurements, you know, converse to what the answer
14 was? I don't know if you have an answer today, but
15 maybe it is something you could comment on at the
16 next hearing coming up.

17 MR. BORUFF: If I could do that, I would
18 prefer it.

19 MR. FEINEN: Okay. Thank you.

20 MR. BORUFF: Okay.

21 HEARING OFFICER LOZUK-LAWLESS: Any
22 questions remaining from the Board at this time?

23 All right. Are there any questions from
24 any members of the audience that you would like to

1 direct to the Department of Agriculture?

2 No questions? Okay. Are there any
3 questions for the other members who have actually
4 sat down; the Department of Natural Resources, the
5 Illinois Environmental Protection Agency or the
6 Department of Public Health from anyone in the
7 audience? Because we can bring them back up.

8 MR. LEGG: Yes.

9 HEARING OFFICER LOZUK-LAWLESS: Who would
10 you like to address your question to?

11 MR. LEGG: The EPA, please.

12 HEARING OFFICER LOZUK-LAWLESS: The EPA.
13 Okay. Could you please come forward? We can bring
14 all those guys back up if we have to.

15 Could you just state your name for the
16 record.

17 MR. LEGG: Jim Legg, L-E-G-G. I am from
18 Lawrence County. I am a farmer and the President
19 of the Lawrence County Farm Bureau.

20 On the change on your rules of the
21 spillway for lagoons of anything over three to four
22 feet above the top of the --

23 MR. WARRINGTON: Right, right.

24 MR. LEGG: -- embankment would be three

1 to four feet over the surface level.

2 MR. WARRINGTON: Right.

3 MR. LEGG: Where do you propose these
4 spillways to go to?

5 MR. WARRINGTON: We anticipate that the
6 spillway would be located by the operator at the
7 most natural place for drainage. That, of course,
8 would be the lowest part of the berm, and it would
9 go to whichever way it would drain. It will be
10 site-specific.

11 MR. LEGG: Wouldn't that be in
12 contradiction to the rules with waterways?
13 Wouldn't a spillway be considered a waterway?

14 MR. WARRINGTON: That's true, but the
15 idea is --

16 MR. LEGG: We will be allowed an
17 exemption from that point; is that what you are
18 saying?

19 MR. WARRINGTON: Yes, we would.

20 MR. LEGG: Okay.

21 MR. WARRINGTON: The intent of the
22 emergency spillway is to be only actually used when
23 you have a catastrophic rainfall. Presently most
24 lagoons are designed to hold all the waste up to a

1 25 year rainfall event, which I believe is
2 somewhere between five and six inches.

3 MR. LEGG: Okay.

4 MR. WARRINGTON: But if that should
5 happen, and perhaps if the operator is a little bit
6 close to his freeboard or he might even have a
7 larger rain event, we don't want overtopping at
8 some random location of that probably dirt berm to
9 then erode that berm and then cause a loss of the
10 entire contents of the lagoon, including the
11 accumulated solids at the bottom.

12 MR. LEGG: I appreciate that. I guess I
13 would question the opposition to put a pipe through
14 the berm, because a pipe could be extended down the
15 exterior of the berm and the outlet below where
16 there wouldn't be any erosion on the berm itself.

17 MR. WARRINGTON: Our problem with putting
18 the pipe through the berm is that mechanically it
19 is very hard to ensure a tight seal from the
20 outside of the pipe and the remaining usually dirt
21 or clay of the berm. If it is not tight you can
22 get seepage, and once seepage starts then you have
23 the potential for larger and larger flows until you
24 have a major gap in the berm.

1 MR. LEGG: Okay.

2 MR. WARRINGTON: Our provision is that if
3 it is engineered sufficiently well, that the
4 engineer is still ready to, you know, certify to
5 that construction or if the Department of
6 Agriculture approves it as part of the registration
7 process then we would allow that, but it is a
8 danger point that we would like to see the operator
9 consider before he includes that in his design.

10 MR. LEGG: There are provisions from the
11 Soil & Water Conservation of such pipe outlets from
12 fields into drainage districts. They basically
13 have a big collar welded around them to stop that
14 seepage down along the pipe. I believe our --

15 MR. WARRINGTON: That kind of engineering
16 approach is to minimize that risk.

17 MR. LEGG: I would question, I guess, why
18 IDNR wants larger setbacks from their property.
19 Why do they think they are more important than the
20 public?

21 HEARING OFFICER LOZUK-LAWLESS: Mr. Legg,
22 we would like to bring up the IDNR, then.

23 MR. MARLIN: I am John Marlin from the
24 Department of Natural Resources. The Department's

1 concern about setbacks is not in any way related to
2 us wanting more protection than other facilities
3 that are populated areas. It is that we believe
4 that the way the rule is written now it is
5 extremely ambiguous as where you start to measure
6 the half mile setback, which is provided for
7 populated areas.

8 In other words, we believe that our
9 facilities that meet the 50 person per week
10 visitation requirement are populated areas the same
11 as a business or a church that meets 50 people a
12 week. So all of those facilities are allocated a
13 half mile distance. So the simplest answer is we
14 are not asking for a greater distance. We are
15 asking for a clearly defined measuring point.

16 The problem you would have if you took,
17 say, a state park and you are a producer trying to
18 locate near a state park, the question would come
19 what is a populated area under this statute. We
20 believe that is extremely ambiguous. Some people
21 would say the boat ramp and the visitors' center
22 and the campground. Somebody else might want to
23 include the hiking trail that has 60 or 70 Boy
24 Scouts every weekend in winter, etcetera, using

1 it.

2 The way the statute is written now and
3 the way that the definition is explained, these
4 things are not clear. We believe that any operator
5 trying to locate near a major state park or similar
6 facility would have an immense amount of difficulty
7 figuring out where to measure from, and there would
8 have to be a serious amount of negotiation between
9 various parties to determine what actually we
10 consider a measuring point.

11 Under the current rules I don't really
12 think there is a clear way to sit down and
13 determine that. There has to be some type of
14 ruling to say what you can consider and what you
15 can't. So the simplest way to do it is to use
16 property boundaries, and I refer back to our
17 earlier testimony in I believe it was DeKalb or
18 Jacksonville.

19 HEARING OFFICER LOZUK-LAWLESS: It was
20 Jacksonville.

21 MR. MARLIN: Where we pointed out that
22 many of our facilities are already surrounded by
23 private residences that would be part of the
24 setback within a half mile of our facilities.

1 There are numerous homes. So that the half mile
2 setback that we are talking about, I believe if you
3 took any of our facilities you would find that
4 there are numerous homes or businesses, churches,
5 etcetera, that are already within that half mile
6 boundary.

7 We don't believe that this would be an
8 excessive thing. We will have soon our testimony
9 from the prior hearing, and you can read what three
10 different witnesses had to say about that; one from
11 a biological point of view and another a facilities
12 manager. We will have those here as soon as Cindy
13 gets back.

14 HEARING OFFICER LOZUK-LAWLESS: She is
15 out copying them right now.

16 MR. LEGG: I appreciate what you are
17 saying. A residence -- the setback laws now from a
18 residence, if a non-farm farmer buys a residence
19 located in the middle of 100 acres we don't measure
20 from the edge of the 100 acres, we measure from the
21 residence where he lives.

22 MR. MARLIN: That's true.

23 MR. LEGG: I guess I agree that there is
24 probably some negotiations that could be done

1 here. If houses are, indeed, around the perimeter
2 of a state facility that, in effect, is going to
3 limit the positioning of the facilities. Our
4 question would be Shawnee Park, large acres of
5 woods, that a farm residence on the other edge of
6 that, you know, we are 50 miles from the center and
7 do 50 people hiking through there once a week
8 within a quarter mile, is that worth hurting the
9 local economy for. If they are going to hike, you
10 know, they might just hike a little faster.

11 (Laughter.)

12 MR. MARLIN: That would be one of our
13 problems. As our witnesses pointed out, the State
14 of Illinois, I believe, ranks 48th in the amount of
15 publicly owned recreation and conservation land per
16 person. We are right at the bottom. The State has
17 a tremendous investment, a dollar investment, in
18 providing the citizens with places to go.

19 The legislative hearings that were held
20 in this matter showed time and again the
21 individuals who live near a livestock operation,
22 usually a hog farm, who could not entertain in the
23 summertime. They had to keep the windows closed.
24 They couldn't do a barbecue. If they invite their

1 relatives from town out to the farm they would
2 leave because there was too much odor. It is our
3 position that the strong smell of animal waste is
4 incompatible with hiking, picnicking, camping, and
5 the type of things that someone goes out to the
6 country to get away from.

7 The other thing I want to mention that
8 was also in our testimony is our view of the
9 example you gave of locating the house in the
10 middle of the field, the law clearly recognizes the
11 fact that a waste lagoon located in the middle of
12 crop land or farmland owned by the farmer that the
13 nature and use of that land as crop land makes it
14 suitable for being a buffer or a setback because
15 they say you can measure from the lagoon.

16 We contend that the reverse is true of
17 property that the DNR or other people manage for
18 recreation, that the fact that we have a hunting
19 and hiking and fishing area that is used by people
20 diversely, I admit many of our hiking trails and
21 hunting areas you don't have a place where 50
22 people sit and read a book all day in the same
23 spot, but the property is used for trails, hiking,
24 nature, photography, all that stuff, so we view our

1 operation --

2 HEARING OFFICER LOZUK-LAWLESS: Mr. Legg,
3 I am sorry to interrupt you, but you know what, you
4 are testifying right now, so if we could just swear
5 you in, would that be all right with you? Because
6 it doesn't seem like you are leading to a question,
7 but you are sort of giving your opinion.

8 MR. LEGG: Oh, all right.

9 HEARING OFFICER LOZUK-LAWLESS: Okay.
10 Would you please swear in Mr. Legg.

11 (Mr. Jim Legg was sworn in by
12 the court reporter.)

13 HEARING OFFICER LOZUK-LAWLESS: I am
14 sorry to interrupt you.

15 MR. LEGG: I didn't realize it was going
16 to get this technical like this.

17 (Laughter.)

18 MR. LEGG: Another question, I didn't
19 understand the -- there was a question about a ten
20 year flood plain as opposed to -- who was that
21 directed to, about whether there was a ten year
22 flood plain or not?

23 HEARING OFFICER LOZUK-LAWLESS: It was
24 directed toward --

1 CHAIRMAN MANNING: I actually asked the
2 question, because the statute refers to a ten year
3 flood plain. We had evidence in the record at one
4 of our prior proceedings that no one knew of any
5 state designated ten year flood plains. So my
6 question was to any of the departments, really,
7 that would ultimately answer that question.

8 If you have some information, go right
9 ahead.

10 MR. LEGG: Well, I guess I have a
11 question. What is your question concerning the
12 flood plain, as no operations being put in a flood
13 plain at all?

14 CHAIRMAN MANNING: No, no, no. There is
15 a reference in the Act to a ten year flood plain.

16 MR. LEGG: And what is that reference, I
17 guess I want to know.

18 CHAIRMAN MANNING: I believe it says the
19 livestock waste shall not be applied in a ten year
20 flood plain.

21 MR. SCOTT FRANK: Unless the --

22 CHAIRMAN MANNING: I am sorry.

23 MR. SCOTT FRANK: It reads a provision of
24 livestock waste may not be applied in a ten year

1 flood plain unless the injection or incorporation
2 method of application is used.

3 CHAIRMAN MANNING: Okay. That's right.
4 My concern is just in developing the rules, we
5 would like to know whether there is such designated
6 ten year flood plains. I think it is important
7 that we all know that.

8 PRESIDING BOARD MEMBER FLEMAL: We are
9 aware that there are no maps for ten year flood
10 plains. No one has gone out and demarcated along
11 any stream where a ten year flood plain exists.
12 But that is, in fact, the problem. How do you, for
13 example, as a farmer, know whether or not you are
14 complying with this ten year flood plain
15 prohibition, and we are concerned that --

16 MR. LEGG: I am not aware of any ten year
17 maps. There are 100 year maps, flood plain maps,
18 but not ten year.

19 CHAIRMAN MANNING: We are aware of the
20 100 year maps, the 500 year maps, but we have never
21 seen a ten year map.

22 MR. LEGG: I guess I didn't know where
23 you were at, what you were asking. I concur with
24 the Department of Ag, that with the incorporation

1 of injection or incorporation from after irrigation
2 that that would -- that I would -- personally, I
3 would say that was acceptable.

4 You realize a 100 year flood plain means
5 there is a one percent chance that that ground will
6 be flooded every year. That is not one flood once
7 every 100 years. That's just a one percent chance
8 at all times. And if, in fact, there is a ten year
9 flood plain, that would be a ten percent chance
10 every year, which would be highly -- a lot higher
11 probability, but with the incorporation laws and
12 injection, I would foresee even if there is such a
13 thing as a ten year that that should not be a
14 problem as far as application is concerned.

15 PRESIDING BOARD MEMBER FLEMAL: Well,
16 let's turn the tables and ask you on this as
17 someone who presumably might have to comply with
18 this prohibition, do you know on your land when you
19 are on your ten year flood plain or not, when you
20 can --

21 MR. LEGG: Well, yes. I don't have a ten
22 year flood plain.

23 PRESIDING BOARD MEMBER FLEMAL: You may
24 not even have a ten year flood plain?

1 MR. LEGG: Well, no, I farm some 100 year
2 flood plain, yes, and the maps are designated.
3 Now, there is a lot of controversy of how accurate
4 those maps are and when they were made and
5 elevations, and the question with the maps are the
6 maps are general. There are no natural islands
7 that are designated in those maps. When it becomes
8 green the whole area is green. That is, in fact,
9 not true. From areas where I live that have never
10 flooded that are indeed in that flood plain, they
11 are surrounded by water, but they are not directly
12 under water.

13 PRESIDING BOARD MEMBER FLEMAL: You are,
14 again, talking about even the 100 year flood plain
15 where as bad as the information may be, there still
16 is information.

17 MR. LEGG: Correct.

18 PRESIDING BOARD MEMBER FLEMAL: Our
19 concern is that we have got a provision here for a
20 ten year flood plain.

21 MR. LEGG: Correct. If there is -- and,
22 in fact, I have never seen a ten year flood plain
23 map.

24 PRESIDING BOARD MEMBER FLEMAL: I think

1 we also have to be aware that this is a statutory
2 provision and the General Assembly, in its wisdom,
3 has indicated that livestock may not be applied on
4 a ten year flood plain, so there may be some limits
5 on our ability to help people identify the ten year
6 flood plain.

7 MR. LEGG: Now, is that not at all or
8 under the Department of Ag's recommendation of
9 unless injection is --

10 PRESIDING BOARD MEMBER FLEMAL: Unless
11 injection.

12 MR. LEGG: Okay.

13 CHAIRMAN MANNING: Our purpose here,
14 really, just so that everybody understands, is when
15 we ask a question don't think it is because we are
16 geared in any particular direction. We ask a
17 question to clarify both the intent of the
18 legislation as we all see it, so that we are all
19 working together here, and as well, to clarify it
20 for all of you so that you know what we mean when
21 we promulgate a rule. That just makes smart sense,
22 and that's what we are trying to do.

23 So because we ask a question doesn't mean
24 we are going in any particular direction. It does

1 mean that we want to make it as clear and as
2 understandable as possible.

3 HEARING OFFICER LOZUK-LAWLESS: We are
4 also trying to build a record for the other
5 remaining four Board Members who aren't here.

6 MR. LEGG: I appreciate your questions
7 and your willingness to ask and learn. I really
8 appreciate that. I guess my questions -- I had
9 some comments, and I don't know if it is
10 appropriate at this time, as far as the application
11 and the sampling procedure.

12 HEARING OFFICER LOZUK-LAWLESS: Go ahead.

13 MR. LEGG: Is that --

14 HEARING OFFICER LOZUK-LAWLESS: That's
15 fine. Go ahead.

16 MR. LEGG: The question on the nitrogen
17 as opposed to the phosphate application records, I
18 don't know of any areas where over application of
19 phosphates becoming a problem unless there is
20 direct soil erosion. As all farmers with the
21 conservation plans, the intent of that conservation
22 plan is to reduce that to the minimum, which we are
23 complying with now anyway.

24 The concern is the nitrate runoff and

1 nitrates in our water sources. And so I guess I
2 would speak in favor of keeping the limitations
3 based on the nitrogen rates as opposed to the
4 phosphate rates.

5 I don't know if you are familiar with --
6 my personal operation has a lagoon system, a two
7 stage lagoon system. The buildings flush into one
8 and then it is a lagoon, but I doubled the size.
9 It overflows into a pipe, into a second storage
10 system. That system pumps back through the
11 building and reflushes. It is a continuous cycle.
12 When they get to a point, we pump them out on the
13 fields. That is a completely separate system than
14 buildings that have pits underneath them where the
15 manure is not diluted at all.

16 The sampling procedure, the problem with
17 getting a representative sample, it is -- that is
18 not a problem. It is the timing of application.
19 And in farming, a week can make a big difference
20 whether you do any at all in the fall or the spring
21 at the time.

22 There are generally accepted amounts of
23 what manure -- under different stage of operations,
24 the farrowing operation, the nursery or finishing

1 or lagoons, there are generally accepted amounts of
2 the fertility amounts in those containers. So
3 personally, what I do, I soil test my ground and
4 then when I apply the manure, I catch a sample of
5 that, of what I am applying. And so I know what I
6 have applied and the amounts I have applied. And
7 then I grow the crop off of it, and then I retest.

8 If my soil is built up to the point that
9 more application is not going to make me any more
10 money, I go to another field. Economics dictate
11 that to me. I am not -- to pollute something you
12 are going to over apply. And this manure is a
13 great asset to me. So you are not going to --
14 farmers are not going to waste this asset. They
15 are going to move it to where it is going to make
16 them money, too. I don't feel like that is a big
17 concern.

18 Having an actual sample is critical. The
19 farmers are going to want to do that on their own,
20 but to have a sampling system before it is applied
21 is really suspect to how it is sampled and the
22 number of samples. Each separate container is
23 going to have a given average. That is -- I heard
24 that question being raised, and I wanted to address

1 that.

2 HEARING OFFICER LOZUK-LAWLESS: Okay.

3 Thank you.

4 Would the Department of Agriculture like
5 to respond to that, given their proposal and the
6 testing procedures that you have proposed?

7 MR. BORUFF: From a practical standpoint,
8 we understand the concerns that you raise, you
9 know, in how to sample, and recognizing that you
10 have only limited amount of time to get the
11 application done in any one year's time, and also
12 that maybe during application you do have a good
13 opportunity to pull many random samples that would
14 make a composite later on.

15 Our initial thinking in this was to make
16 sure that the analysis of the waste that you apply
17 in any one particular year was representative of
18 what you had at that given point in time to try and
19 make management plans as facility specific and in
20 the case of that, that yearly basis, as crop
21 specific as possible.

22 But we appreciate your concerns and the
23 comments that Mr. Harrington has raised in his
24 questioning, and it will be something that we could

1 reconsider or maybe come up with a sampling regimen
2 which would address your concerns.

3 MR. LEGG: I think you will find probably
4 in your own Department that there are a given
5 generalities of analysis from different
6 operations. The testing labs that I deal with,
7 they have assumed amounts on a normal as opposed --
8 a farrowing operation, a nursery, or finishing,
9 that there is an amount that you can assume and
10 apply from that assumption to begin with. And then
11 by the testing procedure the crops grown and find
12 out and go from there as opposed to what you are
13 doing ahead of time, I really doubt that anybody is
14 going to over apply and create a hazard of any
15 sort. It is just not feasible to handle that much
16 volume, to try to avoid that to begin with. That's
17 an unneeded restriction on farmers.

18 HEARING OFFICER LOZUK-LAWLESS: Thank
19 you, Mr. Legg. Thank you very much.

20 MR. LEGG: Thank you.

21 MR. MARLIN: I believe our testimonies
22 have arrived. You can get the testimony you wanted
23 right here.

24 HEARING OFFICER LOZUK-LAWLESS: Are there

1 any other questions of the Department of
2 Agriculture? Are there any other questions for the
3 DNR, the EPA? No? Dr. Marlin?

4 BOARD MEMBER GIRARD: I have a question
5 for the DNR. Going back to where you measure the
6 setbacks, is it the position of the DNR that the
7 proposal to measure the setback from the boundary
8 of a property apply to all recreational lands
9 including say lands that may be owned by the
10 federal government and managed by the forest
11 service or recreational lands owned by say a local
12 park district, that those lands also be measured
13 from the boundary or is it DNR's position that you
14 are just referring to lands that are managed by
15 DNR?

16 MR. MARLIN: Our proposal is for lands
17 managed for recreation and conservation purposes.
18 I don't have a copy in front of me as we sit here,
19 but the intent is to apply to facilities beyond
20 DNR's facilities. That would include, from our
21 testimony, we gave specific examples of Scout and
22 4H camps, for example. We would also -- under the
23 definition, that would include things like the
24 county forest preserve.

1 BOARD MEMBER GIRARD: Thank you.

2 HEARING OFFICER LOZUK-LAWLESS: Dr.
3 Marlin, did you have a question you wanted to
4 pose?

5 MR. MARLIN: Yes, I would like a question
6 or colloquy with the EPA with regard to their
7 proposal for a structured spillway.

8 It was our understanding that with a two
9 foot freeboard above the elevation expected for a
10 six inch rainfall, given the rainfall history of
11 the state, that a two foot freeboard would be
12 adequate, and you would not need what we would call
13 an engineered spillway.

14 We may have a definitional problem here.
15 The concern I am expressing is that if you build,
16 according to the rules, a large lagoon with two
17 feet of freeboard you already have a tremendous
18 investment in having the entire lagoon raised two
19 more feet.

20 To put an engineered spillway on top of
21 that would involve probably at least another foot
22 of height and then a notch of a certain engineered
23 specified size, which would add quite a bit more
24 expense to the lagoon. I can't give you the

1 specific numbers. But when we discussed this
2 in-house with our engineers, they thought that if a
3 spillway type structure was wanted on top of the
4 two foot freeboard, something like an overflow --

5 MR. WARRINGTON: An overflow pipe?

6 MR. MARLIN: Not a pipe.

7 MR. WARRINGTON: Like a swale?

8 MR. MARLIN: Like a swale, yes, a dip, if
9 you will, in the top of the lagoon freeboard such
10 that you would have your two foot freeboard at one
11 spot and have a dip or a swale as opposed to an
12 engineered spillway, and then have that portion of
13 the lagoon near that dip be armored in some way or
14 protected so that in the unlikely event you had a
15 rainfall or other problem where the two foot of
16 freeboard filled up, you would have the ability to
17 discharge the lagoon by gravity flow at a
18 predetermined point, probably at the same point you
19 would have put an engineered spillway.

20 But the concern here is that you can
21 accomplish the same goal at a much lower cost and
22 would something like that be compatible with what
23 the EPA is thinking about at this stage of the
24 game?

1 MR. WARRINGTON: That's correct. We had
2 a discussion about that a few seconds ago, and it
3 is basically not something that an attorney and an
4 entomologist can resolve. But what we are going to
5 do is that we are going to try to come up with some
6 more specific language to define this emergency
7 spillway recommendation, such that it doesn't
8 become such an onerous burden on the operator as
9 could otherwise be engineered, yet it still gives
10 the protection to all of us that this berm is not
11 going to be over topped and then destroyed by
12 admittedly a freakish and a rare event rainfall.

13 MR. MARLIN: To that end, we will have
14 the design certified civil engineers from our
15 office of Water Resources get together with the EPA
16 and see if we need to modify the wording a little
17 bit, and have something for you probably at the
18 Champaign hearing.

19 HEARING OFFICER LOZUK-LAWLESS: Thank
20 you, gentlemen, very much, and if you would like to
21 step down. Thank you gentlemen very much.

22 At this time then we will call one
23 witness who has prefiled testimony and then break
24 for lunch.

1 Okay. So if Mr. Joe Bob Pierce could
2 approach.

3 MR. JOE PIERCE: Thank you.

4 HEARING OFFICER LOZUK-LAWLESS: Would the
5 court reporter please swear in the witness.

6 (Mr. Joe Bob Pierce was sworn
7 in by the court reporter.)

8 HEARING OFFICER LOZUK-LAWLESS: Mr.
9 Pierce, if you would be more comfortable at the
10 table, you are free to sit there.

11 MR. JOE PIERCE: This is fine.

12 HEARING OFFICER LOZUK-LAWLESS: Okay.

13 MR. JOE PIERCE: Just a couple of minutes
14 so we can all get to lunch.

15 HEARING OFFICER LOZUK-LAWLESS: Okay.
16 Just so that the members of the audience know that
17 if you have any other questions the agencies will
18 be around for the remainder of the hearing as well
19 as at the Champaign hearing, if you have any
20 additional questions that you wanted to ask them.

21 Thank you, Mr. Pierce.

22 MR. JOE PIERCE: First of all, I would
23 like to thank the Pollution Control Board for
24 coming to Southern Illinois. We don't often get

1 hearings in this area. We are very appreciative
2 that we don't have to travel so far for that.
3 Especially, I think, it gives the public a chance
4 to express their concerns about some of the
5 regulations regarding large scale livestock
6 facilities.

7 Since I have -- since you all should be
8 getting the prefiled testimony, I won't bore you by
9 reading it. One section that I would like to draw
10 your attention to, though, is that prior to the
11 last election cycle we circulated a petition and in
12 two weeks got 1,500 signatures to put an advisory
13 referendum on the ballot, which basically said
14 would it be -- that we think it is advisable that
15 there be some local regulations or local input when
16 it comes to siting large scale livestock
17 operations. There should be some local control
18 with that.

19 As I mentioned, we collected over 1,500
20 signatures in two weeks and 73 percent of the
21 people who voted for that or who voted, voted for
22 that local control. And I would like for you to
23 take that into consideration as you make your
24 deliberations. I would like to see you do some

1 quick action on this so hopefully that we could get
2 it settled to everyone's best interest. Thank
3 you.

4 HEARING OFFICER LOZUK-LAWLESS: Thank
5 you, Joe Bob.

6 MR. JOE PIERCE: Thank you.

7 HEARING OFFICER LOZUK-LAWLESS: We will
8 be marking Mr. Joe Bob Pierce's testimony as
9 Exhibit Number 41.

10 (Whereupon said document was
11 duly marked for purposes of
12 identification as Exhibit
13 Number 41 as of this date.)

14 HEARING OFFICER LOZUK-LAWLESS: Are there
15 any questions for Mr. Pierce?

16 MR. LEGG: Yes. What is a large
17 livestock --

18 HEARING OFFICER LOZUK-LAWLESS: I am
19 sorry. Could you stand up, please.

20 CHAIRMAN MANNING: We have asked that
21 question before in terms of the definition of what
22 is a large livestock facility. The record is full
23 of questions as to what a large livestock facility
24 is, and there is really no good answer yet.

1 If you want to give your opinion as to
2 what you think it is, go right ahead.

3 MR. JOE PIERCE: We basically used the
4 same one that the legislature used whenever they
5 passed the law.

6 MR. LEGG: As being the maximum size over
7 7,000 animal units, is that what you are
8 considering a large livestock operation, or is it
9 1,000?

10 MR. JOE PIERCE: I believe it was 1,000,
11 I think.

12 CHAIRMAN MANNING: Thank you.

13 HEARING OFFICER LOZUK-LAWLESS: Thank
14 you, Mr. Legg.

15 Was there another question for Mr.
16 Pierce?

17 MR. FISHER: Yes.

18 HEARING OFFICER LOZUK-LAWLESS: Could you
19 stand up, please, and state your name.

20 MR. FISHER: Tom Fisher. Why does the
21 local people think they have the knowledge to site
22 these things or know about the siting of these
23 things?

24 MR. JOE PIERCE: Well, I think large

1 scale livestock operations involve the people that
2 they are around. I feel that they ought to have
3 some involvement in it. It seems as though too
4 often we take all the power away from the people
5 and put it in agencies and regulations and this
6 sort of thing. So I feel that we ought to have
7 some say as to where it goes.

8 HEARING OFFICER LOZUK-LAWLESS: Yes,
9 could you stand up and state your name for the
10 record.

11 MR. SCHWARTZ: Mike Schwartz. What about
12 existing operations that have been set up for, say,
13 25 years? Were the local people going to dictate
14 policy for us?

15 MR. JOE PIERCE: I would assume that
16 those are grandfathered in. Is that correct?

17 CHAIRMAN MANNING: To some extent for
18 some reasons and for other reasons not.

19 Just as a comment toward this debate
20 about local control, and just to explain to you
21 what the role of the Pollution Control Board is in
22 this proceeding, we are here to develop regulations
23 pursuant to the Livestock Waste Management
24 Facilities Act. There are certain issues beyond

1 our control and beyond our ability to deal with in
2 the regulatory proceeding.

3 I understand that there is a great issue
4 regarding local government control and local
5 government siting regarding livestock management
6 facilities. Understand our role, however, is to
7 implement the legislation, and we are not
8 legislators ourselves.

9 So the issue of local government siting
10 is not one that the Board will be dealing with in
11 our regulatory proceeding. Certainly, it is one
12 that we cannot deal with in the regulatory
13 proceeding. Really, a lot of those issues need to
14 be directed to the Illinois Legislature.

15 HEARING OFFICER LOZUK-LAWLESS: Any
16 following questions for Mr. Pierce?

17 Okay. Thank you, sir, very much.

18 MR. JOE PIERCE: Thank you.

19 HEARING OFFICER LOZUK-LAWLESS: All
20 right. Then I think this is a nice time to stop.
21 We will break for one hour. Thank you.

22 (Whereupon a lunch recess was
23 taken.)

24 HEARING OFFICER LOZUK-LAWLESS: Back on

1 the record.

2 We will now proceed with the prefiled
3 testimony of the following individuals, Mr. Michael
4 Rapps, Dr. Richard Tubbs, Mr. Roger Marcoot, Bill
5 Campbell and Jim Frank.

6 If you would swear in the witnesses,
7 please.

8 (Dr. Richard Tubbs, Mr. Michael
9 Rapps, Mr. Roger Marcoot and
10 Mr. James Frank were sworn in
11 by the court reporter.)

12 HEARING OFFICER LOZUK-LAWLESS: Thank
13 you.

14 Mr. Harrington, you could call the
15 witnesses in the order that you want.

16 MR. HARRINGTON: I am going to call Dr.
17 Rick Tubbs as our first witness.

18 You may proceed with your prepared
19 testimony.

20 DR. TUBBS: Good afternoon. My name is
21 Rick Tubbs. I am in a private consultation
22 business in Bowling Green, Kentucky, dealing with
23 swine. The last six years I spent at the
24 University of Missouri as an Extension Swine

1 Veterinarian. The five years before that I was on
2 the faculty at Mississippi State University.

3 My testimony today is based on my years
4 of experience as a swine veterinarian, as a
5 consultant, as an educator. I have also had
6 numerous conversations with public health
7 officials, attend seminars related to public health
8 issues, and I have talked to folks who deal with
9 these issues on a daily basis. I have had
10 conversations with people working in pig production
11 and in infectious disease research.

12 I think other people giving testimony
13 here today have addressed some of the issues of
14 water quality and occupational health, maybe to
15 some extent. As I see it, there are four issues
16 that arise maybe surrounding, the public, and those
17 are water quality, occupational health, worker
18 health, and the health of the public at large and
19 food safety.

20 I get a lot of questions related to human
21 health in the general public related to exposure to
22 pigs. When I talk to public health officials their
23 main concern is food safety, and we have not really
24 addressed food safety today. I don't think that is

1 what this hearing is all about. But I do want to
2 point out that the National Pork Producers Council
3 and the USDA have programs that address the issues
4 of food safety and to some extent occupational
5 safety.

6 So I am going to concentrate my comments
7 today on public exposure to pig farms, just to a
8 pig farm being in the area, since that's mainly the
9 type of questions that I get. Transmission of
10 diseases from pigs to people requires direct
11 contact with the pigs in most cases. And in almost
12 all cases handling the pig manure, the urine or
13 other body fluids is more likely to result in
14 potential transmission of zoonotic diseases to
15 people than aerosol exposure or anything of that
16 nature.

17 People in direct contact with pigs, such
18 as veterinarians, the people who raise the pigs,
19 hog producers, their employees, people who work in
20 slaughter plants, typically are trained how to
21 handle and work with pigs. Most modern pig farms
22 really have high investments in buildings, they
23 have high investments in breeding stock, they put a
24 lot of time and investment in training people,

1 finding the right people, and in a lot of ways take
2 what you might think are extreme measures to
3 protect that investment. Modern farms are tested
4 on a routine basis for a number of diseases that
5 are specific for the pig, and typically are very
6 careful to purchase breeding stock that to the best
7 of their knowledge is free of major pig diseases.

8 In most cases, new farms try to locate at
9 a reasonable distance from other pigs just to
10 protect themselves. Now, that, again, as with some
11 of the setbacks that were discussed earlier, what a
12 reasonable distance is can be debated, but people
13 putting in this type of investment try to locate
14 away from other pigs as much as possible.

15 Most new farms at least require that if
16 visitors are necessary that they be away from other
17 pigs overnight or for a day or two days, depending
18 on the health level of the farm. They require a
19 shower, a change of clothes, before coming into the
20 farm. They are very careful to remove manure and
21 urine from the immediate pig environment, from the
22 environment of the worker. This is done through
23 the modern flooring technologies and some of the
24 manure management systems that were talked about

1 earlier.

2 Pigs are typically housed in
3 age-segregated groups. The buildings are emptied,
4 cleaned, disinfected between groups of pigs and
5 really stringent efforts are made to protect the
6 pigs and the workers from exposure to diseases.
7 This is done primarily because, again, the
8 investment in the pigs needs to be protected, but
9 the same measures that we go through to try to
10 ensure high health status pigs removes the
11 organisms that are of concern to people.

12 Now, I give that background just to give
13 you some of the idea of the routine procedures that
14 are performed on pig farms to minimize disease
15 risk. Let me give you some specific examples of
16 diseases that might potentially be transmitted to
17 people. I think it is important in this context to
18 understand the difference between something that is
19 potential and something that is probable. The
20 diseases I am going to mention can be transmitted
21 from pigs to people. The probability that they are
22 transmitted from a pig farm is very, very low.

23 The first example I will give is a
24 parasitic disease, the large round worm. According

1 to the Center for Disease Control in Atlanta
2 transmission from pigs to people is very, very
3 unlikely. Some form of fecal-oral contact is
4 necessary. Okay. In most cases, when the pig
5 round worm is found, the rare cases when they are
6 found in people, it is because the people have used
7 pig manure to work in their home garden to
8 fertilize the garden, and maybe they have for some
9 reason scratched their nose or stick their finger
10 in their mouth and they pick up a round worm. It
11 happens very rarely. They are much more likely to
12 get round worm from their dog or their cat.

13 A personal example, my wife has two new
14 puppies, and they are cute things. I came in the
15 other day and had a little pig manure on my pants
16 leg and they came in and started licking it off. I
17 called my children in and said come in here. I
18 want you to watch this and see these nasty animals
19 that you let lick you in the face. I mean,
20 that's -- you are much more likely to pick
21 something up from a pet, because you are in close
22 contact with it. The general public is not in
23 close contact with pigs at all.

24 There is one significant viral disease in

1 the U.S. that affects pigs that also can be
2 transmitted to people: Swine Influenza. You read
3 in the papers occasionally, rarely, actually, of
4 people getting Swine Influenza from pigs. It is
5 very rare. Typically it is -- or the few cases
6 that I know about are where pigs have been
7 congregated from a number of different farms, say,
8 at a fair and people have come through to view the
9 pigs and have been exposed to the Swine Influenza
10 virus in that way.

11 Pigs that are housed in environmentally
12 controlled facilities are very unlikely to spread
13 influenza virus out to the general public. That's
14 a worker health issue and, in fact, it rarely
15 occurs from pigs to the workers. People who are in
16 contact with pigs every day rarely get Swine
17 Influenza virus. There are several bacterial
18 diseases that can potentially be transmitted from
19 pigs to people. Again, the reality of the
20 situation is that it is rare. People in direct
21 contact are the ones at the most risk and they have
22 been trained in handling tissues and how to work
23 around pigs and proper personal hygiene. The same
24 things that apply to the common cold, not

1 transmitting the common cold from person to person
2 apply with people who are handling and working with
3 pigs; washing their hands before they eat and
4 before they scratch their nose or whatever.

5 The real possibility of transmission of
6 bacterial diseases from pigs to people other than
7 those who work in direct contact is almost none,
8 almost zero. I give, again, the example of pets
9 and a bacterial organism called Pasteurella. The
10 people at the Centers for Disease Control tell me
11 that there are about 50,000 human cases of
12 Pasteurellosis in the U.S. every year. Almost
13 every case is from a dog or a cat bite or possibly
14 from someone who is in very close contact with dogs
15 and cats.

16 The strains of Pasteurella that pigs have
17 are fairly specific for the pig. They are very
18 unlikely to transmit to humans by aerosol. I guess
19 if your pig bit you, you could get a local
20 infection. But the Centers for Disease Control
21 don't get that reported at all.

22 I hope this information gives you some
23 idea of potential versus probability. There is
24 some potential diseases that we need to be aware

1 of. The real probability, though, is that you are
2 in much more danger from your pet than you are from
3 a pig farm.

4 HEARING OFFICER LOZUK-LAWLESS: Thank
5 you, Dr. Tubbs. Are there any questions for Dr.
6 Tubbs? Anyone in the audience?

7 Seeing none, are there any questions from
8 the Board Members? Okay. Ms. Poulos.

9 MS. POULOS: Large numbers of swine,
10 cattle, they also produce a lot of dust particles
11 in the air and which may not cause diseases
12 necessarily but can cause inflammation and allergic
13 reactions. Do you have any comments as far as that
14 or any experience as far as that?

15 DR. TUBBS: Personally, I think that's an
16 occupational safety issue. There are people who
17 are more sensitive to that, of course.
18 Fortunately, I am not really very sensitive to it.
19 But I have worked with people in the past who were
20 fairly sensitive to the dust particles, and if
21 there are people working in the field related to
22 pigs that need to be in pig farms, what they have
23 done is started wearing masks. I don't see that as
24 an issue to the general public, personally.

1 I know that there are reports of people
2 near hog farms maybe getting headaches or
3 whatever. I have not seen that personally and
4 can't relate to it. I see it as a worker issue,
5 and a farm specific issue in how they handle worker
6 safety.

7 MS. POULOS: How about during a field
8 application? Would that be an issue then for that
9 type of dust particle to become a problem for area
10 communities?

11 DR. TUBBS: I think engineers can answer
12 that better than I can. I have not observed that,
13 again, as a problem. People who are particularly
14 sensitive to it shouldn't perform the duty.

15 MS. POULOS: Okay. Thank you.

16 HEARING OFFICER LOZUK-LAWLESS: Thank
17 you. Any other questions?

18 CHAIRMAN MANNING: I have a question.
19 You stated in your testimony that according to the
20 Center for Disease Control that transmission of
21 disease from pigs to people is unlikely to occur.
22 I was just wondering if you have a document from
23 the Disease Control that you might want to put into
24 evidence through counsel.

1 DR. TUBBS: They said it was very
2 unlikely to occur.

3 CHAIRMAN MANNING: I am sorry. I thought
4 that I said that on the record. I am happy to be
5 corrected. I understand that. I was just
6 wondering if maybe the Disease Control has some
7 sort of document that you might want to put into
8 evidence for the record.

9 DR. TUBBS: What I am citing here is
10 verbal consultations that I have had with specific
11 people in the Centers for Disease Control. They do
12 publish a weekly Morbidity and Mortality Report.

13 CHAIRMAN MANNING: Okay.

14 DR. TUBBS: You know, we can look at that
15 and see what cases have resulted from exposure to
16 pigs, and they tell me there are virtually zero.

17 CHAIRMAN MANNING: Okay.

18 DR. TUBBS: That is the document that I
19 would refer to, the Weekly Morbidity and Mortality
20 Report, published by the Centers for Disease
21 Control.

22 CHAIRMAN MANNING: Okay.

23 HEARING OFFICER LOZUK-LAWLESS: Yes.

24 MR. JIM FRALEY: My name is Jim Fraley.

1 I am with the Illinois Farm Bureau. I would like
2 to ask Dr. Tubbs to elaborate maybe on a zoonotic
3 disease that we have had a big success in
4 eliminating, almost eliminating in the country,
5 bovine brucellosis.

6 DR. TUBBS: Yes, and brucellosis also can
7 affect pigs and, in effect, has been eliminated
8 from pigs. So that is a big success. I am not as
9 close to the cattle industry as I used to be, but I
10 understand that is very, very close to being
11 eliminated in cattle. As you look at that
12 particular disease historically, humans who have
13 contracted that organism primarily have been
14 veterinarians and farmers.

15 It is an issue, again, from a food safety
16 consideration. Before milk was pasteurized, it was
17 a concern, a big concern. After pasteurization,
18 yes, it is still a concern but it doesn't occur,
19 you know. So that's, again, an example of what the
20 agricultural industry can do in eliminating those
21 potentials.

22 If you go down the list of potential
23 zoonotic diseases, most of the concern is food
24 safety. When I called the Centers for Disease

1 Control and started asking them about diseases
2 being transmitted from live pigs to people they
3 almost laughed at me. What they wanted to talk
4 about was food safety. I said, no, that's a
5 different issue. Let's talk about live pigs. They
6 said, we just don't get it reported. It is just --
7 if it occurs, it is not being reported.

8 HEARING OFFICER LOZUK-LAWLESS: Thank
9 you, Dr. Tubbs.

10 Seeing no further questions, Mr.
11 Harrington, you may call your next witness.

12 MR. HARRINGTON: I will call as my next
13 witness Mr. Michael W. Rapps, and ask if he will
14 present his testimony.

15 MR. RAPPS: Yes, sir. I have prefiled
16 this testimony. I will read it into the record.
17 If I deviate at all, it is only because of the
18 context of presenting this today.

19 My name is Michael W. Rapps. I am the
20 founder and principal engineer with the firm of
21 Rapps Engineering and Applied Science, a consulting
22 firm that specializes in civil and environmental
23 engineering, and science applications in the
24 environmental disciplines. Our firm was founded in

1 1978 and employs a staff of 25 engineers,
2 scientists, and specialists based at our
3 Springfield headquarters and at a Mt. Vernon branch
4 office. We operate throughout Illinois and
5 occasionally in bordering states.

6 My curriculum vitae is attached to the
7 prefiled testimony, but in brief, I have been
8 practicing now for about 25 years throughout the
9 state. I have worked throughout the United States
10 and outside of the country in environmental
11 matters. In particular, I deal frequently with
12 issues of groundwater.

13 The Illinois Pork Producers Association
14 asked that I review the subject regulations with
15 respect to matters involving the protection of
16 groundwater and, in particular, provisions for the
17 lining of waste lagoons, as well as the monitoring
18 of liner performance, vis-a-vis groundwater
19 quality. My particular expertise in this regard
20 stems from the experience I have with the
21 permitting, construction, and regulation of
22 landfills, and the investigation and remediation of
23 groundwater impacted by fuel leaks, chemical
24 spills, and other contaminant sources. Although

1 there is little actual experience in Illinois with
2 the regulation of livestock waste lagoons,
3 landfill-related groundwater issues roughly
4 parallel those with livestock wastes.

5 It is my impression and belief that the
6 subject regulations have been proposed due to
7 anticipated problems borne of a rapidly changing
8 industry, and not because of historically observed
9 groundwater problems. Notably, the trend in
10 Illinois and nationally is toward larger and more
11 densely populated livestock operations. Naturally,
12 this equates to correspondingly condensed
13 accumulations of livestock waste.

14 The proposed regulations consequently
15 assume that these larger operations will pose a
16 greater threat to human health and environment with
17 respect to the potential for contamination of
18 underground waters than do the traditional
19 livestock operations that have long operated in
20 Illinois.

21 That livestock waste storage lagoons have
22 the potential to contaminate groundwater is
23 obvious. However, there is a dearth of empirical
24 evidence to illustrate the actual magnitude of the

1 problem as it may already exist or which should be
2 anticipated to exist in the future. Simply put, in
3 this witnesses's 25 years of experience in dealing
4 with environmental matters concerning Illinois
5 groundwater, I am not aware of a single incident in
6 which a health impact was created by groundwater
7 contaminated by livestock waste. This is not to
8 discount that such may have happened and may be
9 ongoing. But, if such problems exist, they are not
10 very common, or at least not commonly reported.

11 I suspect that this has less to do with
12 the performance of existing livestock waste lagoons
13 than it does with the fact that such facilities are
14 typically located in rural areas that are not
15 densely populated. Additionally, groundwater
16 contamination problems in Illinois are very often
17 confined to the uppermost occurrence of
18 groundwater, near the water table, and tend to be
19 localized in extent. As such, there is no body of
20 information or experience upon which one might
21 premise that livestock waste lagoons pose a
22 substantial threat to groundwater, either over
23 extensive areas, or to distant receptors.

24 The regulation of landfills in Illinois

1 began roughly 30 years ago when the Illinois
2 Department of Public Health adopted rules calling
3 for the registration and inspection. Soon
4 thereafter, the Department upgraded the regulations
5 by instituting permit requirements, including
6 provisions for groundwater monitoring. In 1970,
7 responsibility for the regulations of landfills was
8 transferred to the newly created Illinois
9 Environmental Protection Agency.

10 Within two years of its existence, that
11 Agency drafted enhanced solid waste rules that were
12 put in place in 1973. Thereafter followed
13 countless administrative and legislative activities
14 that advanced the effectiveness of the regulatory
15 scheme, including a complete rewrite of the
16 regulations in 1990.

17 The genesis of the regulatory system
18 continues to this day as a function of legislation,
19 the IPCB and court rulings. I have little doubt
20 that the regulation of agricultural waste
21 facilities will follow a similar pattern and become
22 refined as a base of knowledge and experience
23 accumulates.

24 Based on the background just given, it is

1 my opinion that the proposed regulations represent
2 a good starting point in the regulatory process and
3 are a measured response to a problem that is as yet
4 poorly defined. Exceptions to the rule will
5 undoubtedly surface.

6 Fortunately, the regulations contain a
7 rule for the exceptions. In particular, Sections
8 506.204 through 506.206 provide for considerable
9 flexibility, both for the regulators and the
10 regulated. I believe that, prudently administered,
11 the subject regulations will have the desired
12 effect in protecting groundwater.

13 I further believe that the rules are
14 sufficiently flexible so as to target the perceived
15 problems, without creating an undue burden on
16 facilities that are not, by convention, perceived
17 to be a problem. I also suspect that within a
18 short period of time following adoption of the
19 regulations, the true nature of the problem will
20 come into far better focus than is currently the
21 case.

22 Assuch, I believe that the Board should
23 adopt the proposed rules and consider them a first
24 step in a process that will evolve and refine

1 itself in the years to come.

2 HEARING OFFICER LOZUK-LAWLESS: Thank
3 you, Mr. Rapps.

4 Are there any questions from the audience
5 for Mr. Rapps?

6 MR. BOB BRINK: Yes.

7 HEARING OFFICER LOZUK-LAWLESS: Yes,
8 could you come forward and state your name.

9 MR. BOB BRINK: Okay. I am Bob Brink. I
10 am a producer in an adjoining county, Washington
11 County. I was a participant in a water survey in
12 early 1960 by Washington University. Are you aware
13 of this study?

14 MR. RAPPS: In 1960?

15 MR. BOB BRINK: Yes.

16 MR. RAPPS: Let's see, in 1960 I was
17 about ten years old.

18 MR. BOB BRINK: I think it was a matter
19 of record at that time. I think our local
20 Extension maybe can attest to it. We had impure
21 water at that time, high nitrates and everything.
22 I was just commencing farming. Are we going to be
23 in a position of having to have tests now which are
24 working with this impure water at that time not

1 created by hog operations?

2 MR. RAPPS: I know a little bit about
3 that, and the midwest is known, at least in the
4 shallow groundwater in the water table, to have in
5 rural areas, high levels of nitrates and
6 agricultural related compounds not necessarily
7 related to livestock, but through the application
8 of fertilizers and other materials. I know that
9 problem exists.

10 That may actually -- when we talk about
11 monitoring the performance of livestock lagoons in
12 rural areas, it may actually -- how do I want to
13 put this -- overlap with the impacts of a lagoon,
14 potential impacts of a lagoon, because the
15 groundwater in many cases are going to be
16 influenced by fertilizers.

17 MR. BOB BRINK: Well, I know we did
18 considerable research on our land over there and we
19 found that there was no correlation to livestock or
20 septic tanks. One of the test wells was in an
21 alfalfa field completely removed from all
22 residences or from any livestock. It actually came
23 up with the highest nitrate level of all in our
24 particular occasion. I just wondered if we get

1 test wells now coming up with this, automatically
2 we are going to be accused perhaps of polluting the
3 groundwater where it already existed prior to
4 existence of intensive agriculture.

5 MR. RAPPS: I think the provisions for
6 sampling wells as prior to operation of the new
7 facilities so you establish a background water
8 quality, and thereafter measure the water to
9 actually determine if it came from the pond. Now,
10 if you begin with water that is already affected
11 that would be taken care of in this situation.

12 MR. BOB BRINK: Well, I don't have the
13 test data but this was conducted by -- I forget the
14 fella's name. It was a doctor. It was on purity
15 in the water in rural areas. We found that
16 Washington County has a lot of problems. And now
17 if we happened to be running test wells, I didn't
18 want to be responsible for what existed before we
19 came. I have been there for 25 years or 30 years
20 or longer, so it is little bit late to associate
21 with my livestock even though it may exist. That
22 was all I was asking.

23 HEARING OFFICER LOZUK-LAWLESS: Okay.
24 Mr. Warrington?

1 MR. WARRINGTON: Could you have the
2 witness sworn so he could preserve his testimony
3 for the record?

4 HEARING OFFICER LOZUK-LAWLESS: Yes,
5 certainly.

6 MR. BOB BRINK: I am not an authority on
7 this.

8 (Laughter.)

9 HEARING OFFICER LOZUK-LAWLESS: Could you
10 swear in the witness.

11 (Mr. Bob Brink was sworn in by
12 the court reporter.)

13 HEARING OFFICER LOZUK-LAWLESS: Thank
14 you.

15 CHAIRMAN MANNING: If I might, I don't
16 know if this is in the record, but the
17 representative of the Illinois Department of Public
18 Health is still here, is he not?

19 Is it the Department of Public Health
20 that did the study on the groundwater already in
21 terms of the drinking water wells, and do we have
22 that document in evidence or could we get it in
23 evidence?

24 MR. ANTONACCI: I could send you that.

1 Yes, the Department has done a study as well as the
2 Centers for Disease Control. I could send that to
3 you or discuss that here, but appropriately I could
4 send that to you as part of the record.

5 CHAIRMAN MANNING: Okay. Thank you.

6 HEARING OFFICER LOZUK-LAWLESS: Are there
7 any remaining questions of Mr. Rapps?

8 Okay. Seeing none, thank you very much,
9 Mr. Rapps.

10 Mr. Harrington, would you like to
11 continue?

12 MR. HARRINGTON: Yes.

13 HEARING OFFICER LOZUK-LAWLESS: Mr.
14 Harrington, did you want to enter Mr. Rapps' C.V.?

15 MR. HARRINGTON: Yes, please.

16 HEARING OFFICER LOZUK-LAWLESS: Okay. As
17 an exhibit? Do you have a clean copy?

18 MR. HARRINGTON: I will have to get you
19 one.

20 HEARING OFFICER LOZUK-LAWLESS: That is
21 fine. There was one remaining question of Mr.
22 Rapps. I am sorry. Ms. Poulos.

23 MS. POULOS: I just have a quick question
24 about liners. Are you aware of any instances where

1 weather like freeze-thaw situations could create
2 cracks in either clay or synthetic liners?

3 MR. RAPPS: As applied to --

4 MS. POULOS: Lagoons.

5 MR. RAPPS: Lagoons for this sort of
6 operation?

7 MS. POULOS: Yes.

8 MR. RAPPS: I don't know of any. I think
9 that the problem that you run into when you are
10 constructing clay liners is the fact that while
11 they are -- before they are used when you have
12 freeze-thaw conditions that impacts the work that
13 you have done in the field so it freezes overnight
14 and you have some moisture in the lining. Other
15 than that, I am not aware of any problems like
16 that.

17 MS. POULOS: Okay. Thank you.

18 MR. HARRINGTON: I have a couple of
19 follow-up questions, if I may.

20 HEARING OFFICER LOZUK-LAWLESS: Yes, Mr.
21 Harrington.

22 MR. HARRINGTON: Were you here earlier
23 for the Illinois EPA's testimony concerning the
24 construction of spillways for lagoons?

1 MR. RAPPS: Yes, I read James Park's
2 testimony in that regard, I believe.

3 MR. HARRINGTON: Do you have an opinion
4 regarding the viability of that recommendation?

5 MR. RAPPS: Well, to be honest with you,
6 I am not certain I fully understood. I can perhaps
7 agree with not putting the pipe through the berm,
8 but maybe it is possible to put it beneath the
9 berm. Because I think that there is some problems
10 that you might run into with an overflow
11 constructed as a weir, in terms of structural
12 problems, just as you might by putting a pipe
13 through a berm. So there may be some other ways to
14 do this which would solve both purposes.

15 My firm has in the past been involved
16 with the design of some ponds for sediment control
17 which have overflow systems which are basically a
18 pipe that goes through the pond with a cap on it,
19 and it comes down through below the lagoon to allow
20 overflow that way. I think if it is properly
21 constructed that would probably work. I am not
22 sure that we are talking about the same thing here
23 that Jim Park was.

24 HEARING OFFICER LOZUK-LAWLESS: Mr.

1 Harrington, any other questions?

2 MR. HARRINGTON: Did you have some
3 additional information on groundwater
4 contamination, particularly with artificial ponds
5 in the state?

6 MR. RAPPS: Yes, I do. I wanted to bring
7 this to the attention of the Board. Back in
8 1980 -- I realize this is an old study by today's
9 standards, but I don't know that things have
10 changed that much with respect to the regulation of
11 ponds. There was a survey conducted by the IEPA of
12 all of the industrial, agricultural, mining, oil
13 and gas, and municipal waste water impoundments in
14 the state. They were inventoried, counted and
15 mapped.

16 This report actually has more information
17 than anyone would care to read about. It even
18 gives you the average surface area of the various
19 ponds. But I think that it might be helpful to the
20 Board with respect to this issue of ponds. One of
21 the things that I found in this report, paging
22 through it, is it didn't really have any
23 information to suggest that agricultural ponds
24 were, at least by the convention of the time, were

150

1 considered to be a health problem.

2 It did identify some statistics. Maybe I
3 can just pass this on to the Board right now. The
4 total count of impoundments in the state at that
5 time was 7,420, of which only 276 were agricultural
6 ponds. It seemed like most of the ponds were
7 either municipal sewage ponds, mining related
8 ponds, oil and gas, brine lagoons and that type of
9 thing. So by my count, and I don't have a
10 calculator in hand, I think that is probably less
11 than three percent of all impoundments in the
12 state.

13 The other thing that I gleaned from the
14 report was that the typical agricultural pond, at
15 least at the time, had a surface area of about 1.6
16 acres versus the typical industrial pond, which has
17 a surface area of like 20 acres. Mining
18 impoundments were close to 30 acres on average
19 surface area. Municipal ponds were 3.5 acres. So
20 the tendency, I guess, or the trend back then,
21 anyway, was that the ag ponds were not as big as
22 most ponds and there were not as many of them.

23 CHAIRMAN MANNING: Mr. Rapps, when you
24 use the word "ponds" is that interchangeable with

1 "lagoons"?

2 MR. RAPPS: Yes.

3 CHAIRMAN MANNING: Okay.

4 HEARING OFFICER LOZUK-LAWLESS: Dr.

5 Marlin, do you have a question?

6 MR. MARLIN: Yes. I just want to clarify
7 something. Did I understand you to say that you
8 are not aware of any problems with lagoons, I mean
9 livestock lagoons, experiencing cracking or other
10 problems due to freezing and thawing?

11 MR. RAPPS: In the context of the liner.

12 MR. MARLIN: Okay. The liner. Does that
13 also hold true for desiccation when the waste is
14 drawn down?

15 MR. RAPPS: When the pond is emptied?

16 MR. MARLIN: When the pond is drawn down
17 and some of the liner is going to be exposed.

18 MR. RAPPS: Desiccation cracks?

19 MR. MARLIN: Yes.

20 MR. RAPPS: That would certainly happen
21 in clay.

22 MR. MARLIN: Are you aware of any
23 literature covering this topic of the long-term
24 integrity of lagoon liners under these

1 circumstances, such as freezing and thawing and
2 desiccation?

3 MR. RAPPS: No articles that go
4 specifically to that point, but there is quite a
5 bit of literature that deals with the subject of
6 liner performance mostly as relates to landfills, I
7 have to say, as opposed to the impoundments, but
8 the principles are the same, I suppose.

9 MR. MARLIN: When you use the term
10 "liner" here, are you referring to an earthen
11 liner or a synthetic liner?

12 MR. RAPPS: Either.

13 MR. MARLIN: All right. Thank you.

14 HEARING OFFICER LOZUK-LAWLESS: Okay.
15 Mr. Warrington?

16 MR. WARRINGTON: Rich Warrington from the
17 Illinois EPA.

18 When the report refers to agricultural
19 ponds, is there any distinction made between ponds
20 that are used strictly for livestock waste versus
21 ponds that might be used by an agrichemical dealer
22 to contain or control water or runoff?

23 MR. RAPPS: It does not distinguish
24 between those two. So I assume that the number

1 that is listed in the inventory included both
2 varieties.

3 HEARING OFFICER LOZUK-LAWLESS: Are there
4 any other questions for Mr. Rapps?

5 MR. RAO: Yes, I have one.

6 HEARING OFFICER LOZUK-LAWLESS: Okay.

7 MR. RAO: Mr. Rapps, you summarized from
8 the report that these agricultural ponds didn't
9 pose a threat to public health. How does the
10 report evaluate threat to public health?

11 MR. RAPPS: It tries -- it attempted,
12 again, taking in the context of when it was done,
13 1980, it examined the ponds, used a formula for
14 types of materials in the ponds and so forth, and
15 compared the locations of those ponds with respect
16 to potable aquifers. It presents some statistics.
17 Let me page to that. I probably shouldn't have
18 said it --

19 MR. RAO: Was any monitoring involved as
20 part of the study or was it just --

21 MR. RAPPS: There was some monitoring
22 done, yes. In fact, embodied within the study were
23 some fairly detailed investigations of certain
24 incidents that were reported where there were some

1 problems. I don't mean to say that this report
2 states that they are not a problem. It did not
3 report that there were problems. There is a
4 distinction that needs to be drawn there.

5 It reports that, as an example, as
6 regards to agricultural ponds, impoundments, 22
7 percent of the agricultural impoundments did reside
8 over a shallow aquifer, which 78 percent did not of
9 the agricultural impoundments that were assessed.
10 But you find that, interestingly, of the industrial
11 waste ponds more than half resided over shallow
12 aquifers. I don't know why that is, but that is
13 what they found.

14 They did break their assessments down to
15 a high level of potential for contamination and a
16 lower level for potential for contamination. In
17 the agricultural category 85 percent of the
18 inventoried impoundments were in the lower category
19 and 15 percent were in the higher category. And by
20 way of example, in the industrial category, 46
21 percent were in the low priority category, if you
22 would, and 54 percent were in the high priority.
23 So I think this brings it into focus a little bit,
24 the orders of magnitude and the scales which we are

1 talking about.

2 MR. RAO: Thank you.

3 HEARING OFFICER LOZUK-LAWLESS: Yes, Ms.
4 Poulos.

5 MS. POULOS: Do you have any experience
6 with the functional life of the pits as opposed to
7 lagoons? They are mostly made out of concrete, I
8 understand.

9 MR. RAPPS: I do not.

10 HEARING OFFICER LOZUK-LAWLESS: Yes, Mr.
11 Warrington.

12 MR. WARRINGTON: Are you going to
13 introduce this report into evidence? If not, maybe
14 just cite a better title for it and the date so we
15 could look it up.

16 MR. RAPPS: Okay. I was going to say,
17 this is the only copy I have. It probably exists
18 somewhere buried in the libraries at the Agency or
19 the Board. The complete title is Inventory and
20 Assessment of Surface Impoundments in Illinois by
21 Ralph Piskin, Linda Kissinger, Michael Ford, Steve
22 Colantino and John Lesnak. It is dated January
23 1980. I believe this report was funded in part by
24 a grant from the federal government. Let me see if

1 I can find some additional information. It says
2 printed by the authority of the State of Illinois,
3 2-8050, job number 8752.

4 MR. WARRINGTON: Thank you.

5 CHAIRMAN MANNING: If the Agency will
6 search their archives we will do the same

7 (Laughter.)

8 MR. RAPPS: I might add, once more, that
9 this report contains maps that would show the
10 location of all of the ponds in the state.

11 MR. HARRINGTON: If neither the Agency
12 nor the Board can find a copy, we can endeavor to
13 have one made.

14 HEARING OFFICER LOZUK-LAWLESS: I will
15 try to let you know on Monday.

16 MR. LEGG: Would you --

17 HEARING OFFICER LOZUK-LAWLESS: Yes,
18 could you please come forward.

19 MR. LEGG: Would you confirm in the
20 temporary rules that have been submitted to the
21 Board that the recommendations for building lagoons
22 are adequate as far as liners, the clay liners that
23 have been recommended to them, to the Board?

24 MR. RAPPS: Could you please say your

1 question --

2 MR. LEGG: On our temporary rules, our
3 emergency rules that are being acted on now for
4 construction of new facilities --

5 HEARING OFFICER LOZUK-LAWLESS: Mr. Legg,
6 would you want to come forward so he can be able to
7 hear you better?

8 MR. LEGG: Not really.

9 (Laughter.)

10 MR. LEGG: On our temporary emergency
11 rules that are in effect now, which have been
12 suggested to the Board as being the procedure for
13 building new lagoons, in your professional opinion,
14 are those adequate rules to protect our
15 groundwater?

16 MR. RAPPS: I think they are. I stated
17 in my testimony that one of the reasons they are is
18 because the regulations allow for sufficient
19 flexibility so that if the Department decides that
20 they have a special case they can beef the
21 requirements up as they feel necessary, but
22 otherwise, things are fine as far as I am
23 concerned.

24 MR. LEGG: Would you conclude that

1 freezing and thawing -- your point was well taken
2 on under construction -- that once a lagoon is, in
3 fact, in use, that freezing and thawing below the
4 freeze level of the surface does not occur?

5 MR. RAPPS: I would not be concerned
6 about that, no. Correct.

7 MR. LEGG: That is, freezing and thawing
8 does not occur below the frost level?

9 MR. RAPPS: As a rule, no, it would not.

10 MR. LEGG: Or below the ice level of the
11 top of the lagoon?

12 MR. RAPPS: That's correct.

13 MR. LEGG: All right. Thank you.

14 HEARING OFFICER LOZUK-LAWLESS: Thank
15 you.

16 Are there any further questions for Mr.
17 Rapps?

18 No? Okay. Thank you.

19 Mr. Harrington, do you want to enter his
20 C.V. later?

21 MR. HARRINGTON: Yes, we will. Madam
22 Hearing Officer, if I may be excused for just a
23 moment, Mr. Taber will proceed with the
24 introduction of the witnesses.

1 HEARING OFFICER LOZUK-LAWLESS: Yes,
2 certainly. Thank you.

3 MR. TABER: Our next witness is Mr. Roger
4 Marcoot.

5 MR. MARCOOT: Thank you very much. My
6 name is Roger Marcoot. I live near Greenville,
7 Illinois, on a family dairy farm owned and operated
8 by my mother, my brother and his wife, my wife and
9 myself. This medium-sized dairy operation consists
10 of approximately 360 tillable acres of farm ground
11 used to produce feed for 120 mature dairy cows and
12 a like number of replacement animals. In our area,
13 the dairy industry is one of the most significant
14 venues for adding value to the Illinois corn and
15 soybean industries.

16 The Illinois dairy industry is
17 concentrated in Northwestern Illinois and in the
18 Southern one-third of the state. There are
19 approximately 2,000 dairy farm families which
20 produce nearly 2.5 billion pounds of milk each year
21 from the state's 157,000 dairy cows. All of these
22 2,000 dairy farms in Illinois would classify as
23 typical family farms using anyone's standards.

24 The value of milk generates more than

1 \$300 million dollars in farm income, and places
2 Illinois in the top 15 milk producing states in the
3 United States. Our state is a milk-deficit state,
4 and we as dairy producers do not come close to
5 fulfilling our state's needs in terms of fluid milk
6 consumption. Milk from as far away as New Mexico
7 does come into Illinois grocery stores every day.

8 This points out that under the right
9 economic conditions and favorable regulatory
10 conditions the Illinois dairy industry could grow.
11 Collectively, the five largest farmer-owned dairy
12 cooperatives operating in Illinois market more than
13 75 percent of the state's milk production. These
14 five cooperatives employ 1,300 citizens and
15 generate \$46 million dollars in payroll alone.
16 This does not account for the thousands of on-farm
17 employees, contract milk haulers, veterinarians and
18 other professional service providers that are
19 directly impacted by the dairy producers'
20 livelihood.

21 When Governor Edgar appointed the
22 Livestock Industry Task Force, I was fortunate to
23 be selected as the only dairy producer on this Task
24 Force. I accepted this challenge because I believe

1 that a successful livestock industry is essential
2 to the long-term economic viability of rural
3 communities in Illinois and to the state's
4 economy. I also accepted this challenge with the
5 goal of helping to identify areas where the State
6 of Illinois could improve the health of the state's
7 livestock industry.

8 While some may have been concerned about
9 the so-called "megafarms" impact on the traditional
10 family farm, it was my belief that if laws and
11 rules that might be developed were fair and
12 equitable, all segments of the livestock industry
13 would have equal chances of survival.

14 The Livestock Management Facilities Act
15 was initiated under this principle. All sections
16 of this Act address the fact that as operations get
17 larger, there are increased risks. As a result,
18 waste management plans, livestock manager
19 certification, and setback distances are all more
20 restrictions as the number of animal units in the
21 operation increases.

22 The rules for implementation of this Act
23 alter this approach in one specific area. The
24 concern over potential groundwater pollution has

1 resulted in the requirement of test borings,
2 monitoring wells in sensitive areas, and
3 professional certification. This additional cost
4 has been estimated at \$2,000.00 to \$8,000.00 by the
5 Department and 10 to 20 percent higher than that by
6 other sources.

7 Unfortunately, this cost will be the same
8 regardless of the size of the operation and the
9 size of the lagoon. As a result, the use of lagoon
10 systems for waste management and surface runoff
11 control may not be economical for small and
12 medium-sized dairy producers. Most of these
13 operations use open-lot systems where cows are
14 housed in barns, have access to open concrete lots,
15 and as a consequence, we do have lot runoff that
16 needs to be dealt with.

17 An anaerobic lagoon in conjunction with
18 manure storage is a very effective pollution
19 control system. My concern is that the added costs
20 in instituting the rulemaking process takes away a
21 very effective solution to surface pollution in an
22 attempt to address unproven concerns with
23 groundwater pollution from lagoons.

24 While the research is inconclusive, there

1 are indications that anaerobic lagoons properly
2 designed and used will seal themselves under most
3 conditions. This was my experience in Missouri
4 where I spent seven years working for the Extension
5 Service and the dairy industry. During this time,
6 I did spend a considerable amount of time designing
7 dairy facilities including the siting and design of
8 lagoon systems.

9 My recommendation is that the requirement
10 for test boring and monitoring wells be applicable
11 to only those operations exceeding 1,000 animal
12 units. This would return the rules to the intent
13 of the law that as operations increased in size,
14 the risk also increased. I would also like to see
15 some modification to the professional certification
16 requirement so that Extension and Farm Service
17 personnel could fulfil this requirement. These
18 modifications in the proposed rules will allow
19 lagoon systems to continue to be an economical
20 alternative for small and medium-sized livestock
21 producers in Illinois.

22 I have some additional comments that were
23 not in my prefiled testimony that I would like to
24 submit and talk about briefly, if I might.

1 The issue of animal units has probably
2 not been discussed too much. But an animal unit is
3 generally based upon the size of an animal. As an
4 example, in dairy we look at 1.4 animal units for a
5 dairy cow. This is based upon a typical 1,400
6 pound dairy cow. In my particular case, we do not
7 have the Holstein breed, we have the Jersey breed
8 and typically those cows are 900, and a big cow is
9 1,000 pounds. Those cows are not going to be
10 producing as much waste as a 1,400 pound cow.

11 And, in fact, in the sizing of the
12 lagoons using the Soil Conservation Service's
13 guidelines, they take into account the actual
14 estimated body weight of the animal. So to me
15 there is some give and take that needs to go into
16 the animal units so that it is not a hard and fast
17 situation, that all dairy cows are 1.4 animal
18 units, as an example.

19 Another area that I am somewhat concerned
20 about is there are many successful methods of
21 managing animal waste that are currently being used
22 on dairy farms. They might include anaerobic
23 lagoons, earthen manure storage facilities, picket
24 dam storage, and combinations of these and other

1 practices. Flexibility is needed in the approval
2 process to encourage livestock producers to
3 voluntarily adopt the best technology available.

4 One of the things that I am concerned
5 about in the proposed rules -- I do feel the
6 Department has some flexibility in the proposed
7 rules, and I think that is good. The definition of
8 a lagoon in the law refers to all earthen
9 facilities that hold livestock waste. Those of us
10 that work in the industry where we have a -- we may
11 have an anaerobic lagoon, we may have an aerobic
12 lagoon, or we may have a liquid manure storage
13 facility that happens to be earthen sidewalls.
14 They all present different challenges as far as
15 potential groundwater pollution.

16 So we need to be careful when we go about
17 this rulemaking process that we don't try to
18 nitpick and fine tune everything so that we don't
19 have any flexibility left. That is my point with
20 that.

21 Another area is that as future
22 improvements in technology come about and with
23 increased emphasis that research is placing on
24 odors and the amount of nutrients in livestock

1 waste, based upon feeding programs and genetics, we
2 may eventually get to a situation where we have
3 less of a potential problem from livestock than we
4 have today, both from odors and from livestock
5 waste.

6 So we don't want to set up standards that
7 cannot be modified in the future. As an example,
8 setbacks, as we design ways to control and manage
9 odor on livestock farms, the degree of setback
10 becomes less as the problem is less. So we need to
11 have that flexibility in the future.

12 One other thing that I would add that is
13 not in my written supplement is that there has been
14 a lot of time spent this morning on the waste
15 management plan and questions about that.
16 Basically, the waste management plan should be a
17 plan that provides an adequate vegetative or
18 agronomic filter to handle the volume of manure and
19 the nitrogen content of that manure, so it does not
20 present a problem to groundwater or surface
21 pollution. That should be the intent of that.

22 We have spent a lot of time in this
23 rulemaking process to try to identify all of the
24 potentials. As a livestock producer, I think we

1 have the potential for people to say look at all
2 these regulations. I can't comply with it.
3 Therefore, rather than to try to do something on a
4 voluntary basis we may scare people off, even those
5 with less than the threshold animal unit levels.
6 We need to be proactive in getting people to
7 voluntarily do things. So the regulations need to
8 be a little less complicated, perhaps.

9 I will submit two copies of those written
10 comments.

11 HEARING OFFICER LOZUK-LAWLESS: Thank
12 you, Mr. Marcoot. If there is anything in your
13 supplemental that you didn't cover, you can submit
14 it as an exhibit. If you covered everything in
15 your supplemental, there is no need for you to
16 submit it.

17 MR. MARCOOT: I have probably covered
18 everything. It is just a matter of wording.

19 HEARING OFFICER LOZUK-LAWLESS: Okay.
20 Would you like to submit it?

21 MR. MARCOOT: Let's go ahead and submit
22 it.

23 HEARING OFFICER LOZUK-LAWLESS: Okay.
24 Fine.

1 We will be admitting the supplemental
2 comments of Mr. Marcoot as Exhibit Number 42.

3 (Whereupon said document was
4 duly marked for purposes of
5 identification as Exhibit
6 Number 42 as of this date.)

7 HEARING OFFICER LOZUK-LAWLESS: Thank
8 you, Mr. Marcoot.

9 Are there any questions of Mr. Marcoot
10 from anyone in the audience?

11 Okay. Seeing none, Dr. Flemal.

12 PRESIDING BOARD MEMBER FLEMAL: Thank
13 you, Mr. Marcoot. I enjoyed that presentation a
14 great deal. I must say that I am awed at anybody
15 who can milk 120 cows.

16 (Laughter.)

17 PRESIDING BOARD MEMBER FLEMAL: I
18 remember when I --

19 MR. MARCOOT: You need to be awed at my
20 brother. He is doing it right now.

21 (Laughter.)

22 PRESIDING BOARD MEMBER FLEMAL: Which
23 raises a question. You make a plea on behalf of
24 the small and medium-sized dairy producers. At

1 120, how do you consider yourself?

2 MR. MARCOOT: We would probably be a
3 medium-sized operation in our area.

4 PRESIDING BOARD MEMBER FLEMAL: Have you
5 looked at the rule proposal before us to see what
6 it is, and this proposal, if it were adopted, would
7 require you to do in addition to what you do now as
8 your standard practice? Are there things that the
9 adoption of this rule would impose upon you as new
10 requirements?

11 MR. MARCOOT: In terms of the waste
12 management plan and the certified manager program,
13 we are not at that threshold in terms of --

14 PRESIDING BOARD MEMBER FLEMAL: Your
15 operation personally is not?

16 MR. MARCOOT: Personally not. My big
17 concern is on the lagoon registration and
18 certification process. I have a lot of experience
19 with anaerobic lagoons with dairy facilities, and
20 they are a little bit unique from swine operations
21 because they are more open lot and, therefore, have
22 more surfacerunoff to deal with.

23 As we look at potential groundwater
24 contamination, an anaerobic lagoon alone or in

1 combination with some other form of dry manure
2 storage and spreading operation is the most
3 effective and cost effective method of controlling
4 groundwater pollution. The additional \$2,000.00 to
5 \$8,000.00 in a lot of cases in the small and
6 medium-sized operations will be the difference
7 between people adopting a lagoon system as a means
8 of surface water pollution control versus not
9 adopting that.

10 And so it is my concern that we have
11 added some things in terms of trying to address the
12 potential groundwater pollution, and we have
13 ignored the surface water pollution solution that
14 is best available to the dairy producers in the
15 small and medium-sized category.

16 PRESIDING BOARD MEMBER FLEMAL: I see.
17 If the Board were to proceed with your first
18 recommendation, which is to require that the test
19 boring and the monitoring wells be applicable only
20 to operations that exceed 1,000 animal units, do
21 you have some sense of how this would split the
22 population of lagoons into ones that would still
23 have that requirement and how much would fall out
24 as a result of that movement?

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1 MR. MARCOOT: My -- I probably don't have
2 a good answer to that, but my reason for making
3 this recommendation is that as you get to that size
4 of operation, the economics of this additional cost
5 is spread over enough additional units of
6 production that it is not a limiting factor in the
7 cost of production.

8 PRESIDING BOARD MEMBER FLEMAL: In the
9 dairy business how many producers under 1,000
10 animal units, and I take it that is quite a large
11 number of the total, have lagoons as a part of
12 their waste management operation?

13 MR. MARCOOT: I don't have that data. I
14 would just be speculating, so I probably cannot
15 comment on that. I don't have that data as far as
16 the --

17 PRESIDING BOARD MEMBER FLEMAL: Does it
18 tend to be most as opposed to very few?

19 MR. MARCOOT: I would say that there is
20 fewer that don't have -- fewer that have a lagoon
21 system than do. One reason is that I don't think
22 that the lagoon systems have been promoted as much
23 in Illinois as they have been in surrounding
24 states, especially Missouri.

1 PRESIDING BOARD MEMBER FLEMAL: Do you
2 think that perhaps there is a trend in Illinois
3 that lagoons might be becoming a more commonly used
4 option?

5 MR. MARCOOT: The trend in dairy is
6 similar to all other livestock species, that
7 economics has driven farms to get larger. And as
8 we get larger we look at different, more efficient
9 ways of handling all of our management problems.

10 PRESIDING BOARD MEMBER FLEMAL: Another
11 one of your recommendations is to -- I will just
12 quote the language, I think, that you gave us.
13 "Modification to the professional certification
14 requirement so that the Extension and Farm Service
15 personnel could fullfil this requirement." Is the
16 professional certification that you are referring
17 to is that which is associated with lagoon design?

18 MR. MARCOOT: Yes.

19 PRESIDING BOARD MEMBER FLEMAL: Am I
20 understanding that correctly?

21 MR. MARCOOT: Yes.

22 PRESIDING BOARD MEMBER FLEMAL: So you
23 would have someone other than a professional
24 engineer or a licensed geologist be able to perform

1 that?

2 MR. MARCOOT: Yes. Let me back -- that's
3 right. I will back up and explain why I proposed
4 that. In my experience in Missouri, the system
5 that was in place in Missouri in the 1970s when I
6 worked there was that a livestock producer would
7 determine that he wanted to construct a lagoon
8 system. He would go either to the Soil
9 Conservation Service or the Extension personnel and
10 say would you design this facility for me.
11 Together they would design it based upon the design
12 criteria that were established by the Missouri
13 Department of Natural Resources. So it is
14 basically a mathematical calculation that anyone
15 that can add and subtract can do.

16 Then that application is submitted to the
17 Department of Natural Resources or the Department
18 of Agriculture in Illinois to be checked for
19 accuracy, and then a permit to construct would be
20 issued. The supervision of the construction was
21 done by the Soil Conservation Service, and upon
22 completion they would certify that the facility was
23 constructed according to the design, and the permit
24 to use would be issued. There is a lot less red

1 tape than some of the things that we are talking
2 about in this Act.

3 PRESIDING BOARD MEMBER FLEMAL: Would
4 there be circumstances where the Extension or the
5 Farm Service personnel might, in fact, be licensed
6 professional engineers?

7 MR. MARCOOT: That would be possible.

8 PRESIDING BOARD MEMBER FLEMAL: So it is
9 possible that both roles could, in effect, be one
10 person?

11 MR. MARCOOT: I think one of the concerns
12 that those people have today is the potential
13 liability that might exist in putting their names
14 on those, whereas if the system was in place that
15 they would authorize based upon the predesign
16 standards, where it was more a matter of
17 mathematical calculations, it would be much more
18 effective. It opens some doors for small and
19 medium producers to reduce some of the costs
20 involved in using these types of facilities.
21 That's the reason for my proposal, is that I am
22 looking at ways that we can get people to adopt the
23 best technology at a cost that is economically
24 feasible for their operations.

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you, Mr. Marcoot.

3 CHAIRMAN MANNING: I have some follow-up
4 to that, as well.

5 Mr. Marcoot, what would be considered a
6 lagoon at your facility, because the definition of
7 a lagoon, I think, as you recognize, in the
8 Livestock Management Facilities Act, is very
9 broad. It is considerably different, isn't it,
10 than what we might consider to be a lagoon in a
11 large swine operation? Could you explain those
12 differences in terms of --

13 MR. MARCOOT: Well, I think the
14 difference is in terms of whether we are actually
15 designing an anaerobic lagoon as a means of
16 livestock waste management or if we are designing
17 an earthen liquid manure pit that is called a
18 lagoon, under the terms of the Act, that basically
19 handles liquid manure storage, but does not handle
20 maybe lot runoff or surface water.

21 So some of these things they are designed
22 to do two different things, but yet we are throwing
23 them in the same category in terms of our
24 definition. I just -- I don't know what the

1 solution to that is other than the fact that we
2 need to have some flexibility in understanding that
3 there are differences and different ways to manage
4 those so that the producer gets the most economical
5 use of his facility.

6 CHAIRMAN MANNING: But you would agree
7 that part of the problem is the result of the very
8 broad definition of lagoon?

9 MR. MARCOOT: In my opinion that is true,
10 yes. I think there are some facilities that could
11 be used today or in the future use that would
12 include earthen berms or banks that might fall
13 under the definition of lagoons, but there is some
14 potential there for the elimination of some good
15 alternatives.

16 HEARING OFFICER LOZUK-LAWLESS: Yes, Dr.
17 Girard.

18 BOARD MEMBER GIRARD: I have a question.
19 We have had considerable testimony that odor
20 control is a very important consideration in a
21 swine waste lagoon. Is odor control an important
22 problem in a dairy waste lagoon and, if so, what
23 methods do you have to manage it?

24 MR. MARCOOT: Dairy waste are not as

1 strong an odor generally as swine waste.

2 HEARING OFFICER LOZUK-LAWLESS: Would you
3 speak up, please?

4 MR. MARCOOT: The waste in a dairy lagoon
5 is not generally as strong an odor as in the swine
6 lagoon. Now, if we talk about an anaerobic lagoon
7 designed to serve to anaerobically digest the
8 animal waste, the ones that I have been associated
9 with have a very slight odor but not a
10 significantly offensive odor.

11 Again, you are dealing with a dairy cow
12 being a ruminant, that takes a lot of fiber and
13 digests it versus a hog, which is a nonruminant
14 that basically takes grains, low fiber, and digests
15 it. So it is a different digestive process and,
16 therefore, the manure is different in the way it
17 can be handled in different facilities. If that
18 answers your question or not --

19 BOARD MEMBER GIRARD: Thank you. It
20 does.

21 MR. MARCOOT: Maybe more than you
22 wanted.

23 HEARING OFFICER LOZUK-LAWLESS: Did you
24 have a question?

1 MS. MICHELLE BARBEE: Yes.

2 HEARING OFFICER LOZUK-LAWLESS: Could you
3 come forward and state your name, please.

4 MS. MICHELLE BARBEE: My name is
5 Michelle. My last name is Barbee, B-A-R-B-E-E. I
6 deal a lot with customers in the State of Indiana.

7 I address this to you simply as a member
8 of the Task Force. Was there ever any discussion
9 as to regulating the number of acres that you had
10 to have to spread manure on during any of this
11 process, because I think in the State of Indiana
12 they have regulated that, and we have seen
13 producers who have not been able to expand because
14 they did not have enough acres to spread on. Was
15 that ever discussed?

16 MR. MARCOOT: Not in those specific
17 terms. But when you look at the Livestock Waste
18 Management Plan, the intent of that is that you
19 have sufficient acreage to dispose of the animal
20 waste in an agronomically acceptable and feasible
21 manner. No matter how you cut it, that's the bottom
22 line on the animal waste management plan, is that
23 you have enough ground out there to put the manure
24 on, in whatever form you have it in, so that it is

1 agronomically a sound practice.

2 MS. MICHELLE BARBEE: And then if you
3 have not got the land, if you don't do as much
4 grain farming as you do hog operation or whatever,
5 are you allowed then to contract with people to
6 take the manure, that type of thing?

7 MR. MARCOOT: Yes, that was discussed at
8 the Livestock Task Force. If you had a contract in
9 place with a neighbor to apply your animal waste on
10 his ground, as long as you have available the
11 adequate number of acres, you would not have to own
12 them.

13 MS. MICHELLE BARBEE: And how does that
14 apply to setback? The neighbor's field that you
15 are going to spread on, does that have to be X
16 number of miles from neighboring facilities?

17 MR. MARCOOT: I can't answer that
18 question, I don't think, intelligently.

19 MS. MICHELLE BARBEE: I didn't know if
20 that was discussed or not. Thank you.

21 HEARING OFFICER LOZUK-LAWLESS: Are there
22 any other questions for Mr. Marcoot?

23 MR. RAO: Yes, I have a question.

24 HEARING OFFICER LOZUK-LAWLESS: Okay.

1 MR. RAO: Mr. Marcoot, you mentioned how
2 the definition of this livestock waste lagoon
3 includes other waste management types of
4 facilities. What kind of -- is the impact on
5 groundwater also very different with these
6 different facilities, like a storage pit versus a
7 lagoon?

8 MR. MARCOOT: I am not an engineer. I
9 have not researched that, so I am not sure I can
10 give --

11 MR. RAO: If you just think about it in
12 terms of the nature of the waste that is stored.

13 MR. MARCOOT: In terms of the nature of
14 the waste, a liquid earthen facility is
15 concentrated livestock waste. An anaerobic lagoon
16 is diluted livestock waste. So that would be the
17 difference. Generally when it is diluted it is
18 more volume.

19 MR. RAO: Yes.

20 MR. MARCOOT: But as far as the potential
21 for groundwater contamination, I think there is
22 some research that indicates that lagoons,
23 anaerobic lagoons, in dairy at least, will seal
24 themselves to some degree. We need -- I think it

1 is kind of an open door that we are trying to
2 close, but we don't have all of the data.

3 MR. RAO: We have heard about that quite
4 a few times during these hearings. So far we have
5 not received any research publications or any
6 studies that support it.

7 HEARING OFFICER LOZUK-LAWLESS: Thank
8 you, Mr. Marcoot.

9 Yes, Mr. Warrington.

10 MR. WARRINGTON: In your testimony, Mr.
11 Marcoot, you talked about the distinctions or lack
12 thereof between anaerobic lagoons and other types
13 of storage or holding ponds. In your reading of
14 the rules, do you understand that there is a
15 distinction in the Livestock Management Facilities
16 Act in what is covered under that Act, that lagoons
17 are covered, but the definition of lagoons doesn't
18 extend to, say, holding ponds or storage areas?

19 MR. MARCOOT: Yes, I understand that, but
20 they do extend to earthen liquid manure storage
21 facilities, as I understand it. Somebody can help
22 me out if I am wrong, but that is my
23 understanding.

24 MR. SAGER: Yes, the IDOA --

1 HEARING OFFICER LOZUK-LAWLESS: I am
2 sorry. Could you stand up and state your name?

3 MR. SAGER: Michael Sager. I am a farmer
4 and I also work for NRCS.

5 HEARING OFFICER LOZUK-LAWLESS: Okay.
6 Could you swear him in because he is going to
7 answer a question.

8 (Mr. Michael Sager was sworn in
9 by the court reporter.)

10 MR. SAGER: We were of the assumption,
11 too -- Joe Stightly (spelled phonetically) with the
12 EPA is our field manager of this area. We were of
13 the assumption that lagoons and holding ponds were
14 different, as it is stated in your book, Title 35.
15 The IDOA sent down a ruling, and Warren Goetsch
16 said that holding ponds and lagoons are classed the
17 same. So we are bound.

18 HEARING OFFICER LOZUK-LAWLESS: Yes, Mr.
19 Goetsch.

20 MR. GOETSCH: My turn. The Department
21 did contact the USDA and the NRCS because there was
22 confusion and, evidently, there still is confusion
23 as to what is covered and what isn't covered. It
24 has been our interpretation that a storage

1 structure -- I shouldn't say -- a storage and
2 treatment structure, as it is defined in the
3 Livestock Management Facilities Act, that is
4 receiving waste in addition to runoff would be
5 included as a lagoon and would be regulated under
6 both the statute and our emergency rule and our
7 proposed rule.

8 However, a holding pond, which receives
9 runoff from a feedlot, runoff that would be or
10 could be contaminated or precipitation contaminated
11 from contact in the feedlot would not be covered.
12 If the facility owner or operator was moving all
13 manure, daily scraping or whatever, into that
14 storage and treatment structure, then it would be
15 classified as a lagoon.

16 If he was doing daily scraping to a
17 storage area, whether it be a picket dam structure,
18 an earthen manure storage structure, whatever, and
19 was not allowing it to go into this holding pond,
20 then the holding pond would not be regulated under
21 this, either statute or rule.

22 MR. MARCOOT: That's my understanding
23 also.

24 CHAIRMAN MANNING: That's your

1 understanding also?

2 MR. MARCOOT: The holding pond itself
3 would simply be a vehicle to have a runoff but no
4 direct -- the manure was not directly placed into
5 that mechanically. That would --

6 MR. GOETSCH: That would be consistent
7 with our interpretation.

8 MR. MARCOOT: My point is that the -- an
9 earthen liquid manure pit where you are pushing
10 liquid manure into an open storage facility would
11 be covered under the lagoon definition, and there
12 would be a different type of management facility
13 than an anaerobic lagoon that handled solid waste
14 and runoff.

15 MR. GOETSCH: I think we are still
16 differing a little bit in that the definition in
17 the Livestock Management Facilities Act talks about
18 storage and treatment. And that it is our
19 understanding, that an earthen storage structure
20 that is used in many dairy facilities, free stall
21 facilities, where they would do scraping or
22 whatever means of conveyance of the materials into
23 the structure, there is no treatment intended.
24 There is no dilution factor added. There is no

1 dilution waters added. It is storage and storage
2 only.

3 The same thing, I guess, could be said
4 for a holding pond in that it is storage only and
5 it is also the opposite end of the spectrum in
6 terms of the intensity or the amount of manure that
7 would be there. And that the crafters of the
8 Livestock Management Facilities Act were targeting
9 the combination of storage and treatment that would
10 be in an anaerobic lagoon. So that the Department
11 does not feel that either end of that spectrum is
12 included, only the combination of storage and
13 treatment.

14 MR. MARCOOT: I am glad that is read into
15 the record.

16 CHAIRMAN MANNING: I am as well, because
17 this has been a point of confusion for us, even in
18 the emergency rule setting, as a matter of fact, in
19 terms of the holding pond lagoon and the whole
20 definition. So it is important that we get this
21 information on the record. Equally important is --
22 it is important, I think, from a government
23 perspective, that the DOA and the Agency are sort
24 of on the same page in terms of the definitions.

1 So I would ask the Agency, that being the
2 EPA, if you have a difference of opinion in terms
3 of that distinction, to make it public on this
4 record before we close. If you are okay with that,
5 you should say that as well.

6 Go ahead, A.G.

7 MR. A.G. TAYLOR: A.G. Taylor with the
8 EPA.

9 HEARING OFFICER LOZUK-LAWLESS: Could you
10 swear in A.G. Taylor, please?

11 (Mr. A.G. Taylor was sworn in
12 by the court reporter.)

13 MR. A.G. TAYLOR: I just have a question,
14 and this may help clarify this point. In the
15 Livestock Management Facilities Act, and I think
16 you alluded to this to a degree. It defines lagoon
17 as a structure designed for biological
18 stabilization and storage of livestock waste. Now,
19 our field people have encountered a lot of earthen
20 structures in their history of going out and doing
21 field inspections that held waste, livestock waste,
22 and they were inadvertently called lagoons. But I
23 don't think in the vast majority of cases that they
24 could be considered to be designed to biologically

1 stabilize the waste. They were more for storage.

2 I am not sure how -- and I want you to
3 answer this, Warren -- how those structures fit
4 within what your interpretation of the lagoon is as
5 it applies to the Livestock Management Facilities
6 Act.

7 MR. GOETSCH: I am not sure if I can
8 answer that completely.

9 CHAIRMAN MANNING: I think we may have to
10 in the final analysis, but go ahead. It would be
11 nice if you guys came up with the solution.

12 MR. GOETSCH: I think that goes maybe to
13 the heart of why we talked to -- or the Department
14 contacted the NRCS in regards to holding ponds.
15 The issue that we had been contacted about involved
16 facilities or a couple of producers that were under
17 the impression that if they were calling a facility
18 a holding pond that even though it was receiving --
19 it was a -- in this particular case it was a
20 circulating flush system where manure from a
21 confinement facility was being removed from a
22 building, moved through some type of settling
23 structure into an earthen impoundment and then
24 diluted material was being taken off of that and

1 run back through the building. And they wanted to
2 call it a holding pond, and, therefore, have it be
3 exempt from this rule.

4 And our interpretation was that in that
5 case that they were intending to have some type of
6 biological stabilization occur to the waste, and it
7 should be characterized as a lagoon under the
8 definition of the Act and, therefore, it was
9 subject to the rule.

10 So I guess I would agree with A.G. that
11 there have been a lot of cases in the past where
12 impoundments have been made and were perhaps
13 designed for a certain amount of biological
14 stabilization or designed for a certain amount of
15 dilution, but perhaps were not operated in that
16 manner. That should not preclude them from being
17 regulated under this statute.

18 If the point is that those facilities are
19 designed for both storage and biological
20 stabilization, then whether or not they are
21 operated in that manner should not preclude them
22 from being regulated.

23 I am not sure if that answered your
24 question, A.G.

1 MR. A.G. TAYLOR: Not totally.

2 BOARD MEMBER GIRARD: I have a question.
3 Can you have a holding pond which is not designed
4 for biological stabilization? What is the function
5 of a holding pond?

6 MR. GOETSCH: In our view, a holding pond
7 is intended to receive -- and I believe this is
8 borne out in some of the definitions in Subtitle E,
9 which I don't have in front of me. But it is
10 intended to receive precipitation that has been
11 contaminated by or contaminated with manure as that
12 precipitation has fallen on a feedlot. And it is
13 not -- and, therefore, the holding pond is just
14 that. It is holding that material. It is not
15 specifically designed to ensure that a certain
16 dilution rate is provided and that a certain amount
17 of treatment is happening to that waste.

18 Whereas, a lagoon, we are prescribing a
19 dilution amount, we are designing it to ensure that
20 a certain amount, only a certain loading rate is
21 occurring, that we are managing the amount of
22 material, both dilution water and livestock waste,
23 we are managing the amount of that that is in there
24 at any one time so we can maintain certain

1 populations of bacteria to assure that it is being
2 stabilized appropriately.

3 (Mr. Goetsch was handed a
4 document to review.)

5 MR. GOETSCH: Under 35 IAC 501.255 a
6 holding pond is defined as being designed for
7 interception and temporary storage of feedlot
8 runoff, not specifically for any type of biological
9 stabilization.

10 MR. MARCOOT: Yes.

11 CHAIRMAN MANNING: That's your
12 understanding, as well, Mr. Marcoot?

13 MR. MARCOOT: A holding pond is for lot
14 runoff to keep it from entering the groundwater or
15 the surface waters of the State of Illinois.

16 HEARING OFFICER LOZUK-LAWLESS: Mr.
17 Taylor?

18 MR. A.G. TAYLOR: To clarify what I was
19 asking, the facility I was talking about, Warren,
20 were ones that were basically holes in the ground
21 that people used to store waste. In other words,
22 an earthen waste storage pit or pond, whatever you
23 want to call it. But being organic matter and
24 having some degree of oxygen and some degree of

1 water and the necessary factors, there will be some
2 consequential degradation of the waste. But the
3 facilities that I was referring to would not be
4 ones that were specifically designed to provide the
5 appropriate biological stabilization. Where does
6 that fit within your interpretation?

7 MR. GOETSCH: This is one of the things
8 that we were struggling with when we proposed the
9 emergency rule. If the Board certainly, I am sure,
10 recalls, we had proposed some design standards for
11 holding ponds to try and address that one end of
12 the spectrum. In determining or trying to provide
13 or trying to develop the proposal for the permanent
14 rule, we took notice that the Board deemed the
15 group of facilities that were going to be regulated
16 was more narrowing in focus and could only be
17 targeted at lagoons as defined.

18 So that I don't know whether there is,
19 the way the statutory language is set up now,
20 whether there is anything more that can be done.
21 We are under the impression that this is a smaller
22 group, and that it would only be those facilities
23 that are intended to receive waste and to provide
24 some type of biological stabilization to that

1 waste. So I don't know that I can answer A.G.'s
2 question.

3 MR. RAO: Is there any way to -- you
4 know, when you say designed for biological
5 stabilization, can you say designed in accordance
6 with the ASAE standards, so that if there are any
7 thresholds for dilution above stabilization?

8 MR. GOETSCH: I would suggest that that
9 is what we -- we are prescribing that in the rule
10 proposal, that either of those two design standards
11 are appropriate. But whether there is still such a
12 large loophole that you could perhaps drive a truck
13 through in terms of if someone wants to suggest
14 they want to design a facility just for a different
15 activity, just for storage, perhaps other -- some
16 of the nuisance portions of the rule, either this
17 or Subtitle E, would keep that from happening.

18 MS. TIPSORD: I guess I have a question.
19 A definition you read into the record from the
20 Board's rules at 35 IAC 501.255 refers to the
21 holding ponds at feedlots. Is it consistent, then,
22 with your position that you can only have a holding
23 pond at a feedlot?

24 MR. GOETSCH: Without giving it a lot of

1 thought, I believe that that probably would be the
2 case in that a holding pond is, by definition, a
3 structure that is receiving precipitation that is
4 contaminated by some type of manure, such that
5 most, if not all, confinement facilities now
6 have -- I mean, are covered buildings, there really
7 isn't -- there are really not a lot of areas that
8 are exposed that would provide for that kind of
9 contamination of normal precipitation. Perhaps
10 some of the other definitions included in 501, I
11 believe, clarify that even further. Again, I don't
12 have it quite in front of me at this point.

13 MS. TIPSORD: I understand. Thank you.

14 CHAIRMAN MANNING: Thank you, Warren.

15 MR. GOETSCH: You are welcome.

16 CHAIRMAN MANNING: I think we have got a
17 lot now on the record. If the Board has any
18 further questions on this particular issue we will
19 ask as we go along. If you have any further
20 clarifications, either the DOA or the Agency, you
21 know how to get it in.

22 MR. A.G. TAYLOR: The dialogue will
23 continue.

24 CHAIRMAN MANNING: Okay. Thank you. I

1 am really happy we had this dialog, by the way,
2 because it is true in the emergency rulemaking that
3 we deliberated over the issue and had some degree
4 of confusion over the debate on the holding ponds
5 and lagoons. This has been very helpful.

6 MR. MARCOOT: If I might --

7 CHAIRMAN MANNING: Go ahead.

8 MR. MARCOOT: If I might, I think the
9 other issue besides holding ponds versus lagoons is
10 earthen liquid manure storage facilities versus
11 lagoons.

12 CHAIRMAN MANNING: Okay.

13 MR. MARCOOT: An earthen liquid manure
14 storage facility would have the same kind of
15 biological activity as a Slurry Store or concrete
16 pit that are currently exempt from the
17 regulations. They would function, from a
18 management standpoint, the same way. They would
19 just simply be a device to store liquid manure, the
20 same as a Slurry Store or a concrete liquid manure
21 pit. It would just be a different vehicle for
22 doing that.

23 So that raises the question. I think
24 what Mr. Goetsch said was that they would not fall

1 under the definition of a lagoon because of the
2 limited biological activity. I think that's been
3 an area of confusion. I was confused and I had
4 different information initially.

5 CHAIRMAN MANNING: Thank you. And we
6 will try to clarify the conclusion by the time that
7 we --

8 BOARD MEMBER GIRARD: I do have a
9 question. In Section 10.25 of the Livestock
10 Management Facilities Act, it does say a lagoon
11 does not include structures such as manufactured
12 slurry storage structures or pits under buildings,
13 as defined in the rules under the Environmental
14 Protection Act concerning agriculture related
15 pollution. It could be read that this exclusion is
16 for structures which are under buildings.

17 MR. MARCOOT: Slurry Store is not
18 constructed under buildings. They are outside.

19 BOARD MEMBER GIRARD: Okay. So you are
20 saying the manufactured slurry storage structure,
21 could be an earthen structure?

22 MR. MARCOOT: Slurry Store is a trade
23 name for a particular type of liquid manure storage
24 facility that would be above ground, open topped, a

1 glass lined steel tank.

2 BOARD MEMBER GIRARD: That would be an
3 outside structure?

4 MR. MARCOOT: It would be outside.

5 BOARD MEMBER GIRARD: So you are saying
6 that they left out an earthen storage structure,
7 that could be outside, from this list?

8 MR. MARCOOT: An earthen storage
9 structure would function the same as the two
10 examples which were exempted in the law.

11 BOARD MEMBER GIRARD: Thank you.

12 HEARING OFFICER LOZUK-LAWLESS: Mr. Rao,
13 did you have another question?

14 MR. RAO: No. I can ask another
15 question.

16 (Laughter.)

17 MR. MARCOOT: You don't have to.

18 MR. RAO: When you talk about this liquid
19 manure, what would the dilution factor be compared
20 to an anaerobic lagoon? Because that could define
21 what a lagoon is.

22 MR. MARCOOT: We need to get some of the
23 agricultural engineers to give you the exact data
24 on that, but basically liquid manure would be the

1 manure that comes from the animal in terms of urine
2 and feces with a small amount perhaps of water from
3 water that spills, or in the case of a milking
4 parlor the wash water that comes out of the milking
5 parlor. That would be part of that liquid manure
6 in an anaerobic lagoon. It is much more diluted.
7 As far as the dry matter content of each, I don't
8 have those numbers, but Mr. Funk could get those
9 for you.

10 MR. RAO: Okay.

11 CHAIRMAN MANNING: We need to get to
12 their testimony anyway.

13 HEARING OFFICER LOZUK-LAWLESS: Are there
14 any other questions for Mr. Marcoot?

15 BOARD MEMBER GIRARD: Could I just make
16 one statement along these lines? If there are
17 memos out there or any other documents where there
18 have been attempts to try to define lagoon, define
19 holding pond, and list out all the structures, that
20 have gone between state agencies and federal
21 agencies, please have those introduced into the
22 record.

23 HEARING OFFICER LOZUK-LAWLESS: Thank
24 you, Dr. Girard.

1 Mr. Taber, would you like to call another
2 witness?

3 MR. TABER: Yes. I don't believe that
4 Mr. Rapps' C.V. has been entered as an exhibit yet.

5 HEARING OFFICER LOZUK-LAWLESS: It has
6 not.

7 MR. TABER: We have it here for entry as
8 an exhibit.

9 HEARING OFFICER LOZUK-LAWLESS: We will
10 mark Mr. Rapps' C.V. as Exhibit Number 43 for the
11 record.

12 (Whereupon said document was
13 duly marked for purposes of
14 identification as Exhibit
15 Number 43 as of this date.)

16 HEARING OFFICER LOZUK-LAWLESS: Mr.
17 Taber, do you want to call your next witness?

18 MR. TABER: Yes. Just a second, please.

19 HEARING OFFICER LOZUK-LAWLESS: Okay.

20 MR. TABER: We call as our next witness
21 Mr. Bill Campbell. I believe he has not been sworn
22 in yet.

23 HEARING OFFICER LOZUK-LAWLESS: You were
24 not sworn in?

1 MR. CAMPBELL: I was out when you started
2 the proceedings.

3 HEARING OFFICER LOZUK-LAWLESS: Oh, all
4 right.

5 Would you please swear in the witness.

6 (Mr. Bill Campbell was sworn in
7 by the court reporter.)

8 HEARING OFFICER LOZUK-LAWLESS: You may
9 proceed.

10 MR. CAMPBELL: Thank you. I am Bill
11 Campbell. I am the Extension Educator of Farm
12 Systems with the University of Illinois Cooperative
13 Extension Service, based in the Springfield
14 Extension Center in Springfield.

15 Over the last four years I have been
16 advising farmers and various other livestock
17 producers as a whole in the area of all aspects of
18 engineering associated with agriculture, but
19 primarily my function has been to advise farmers on
20 various manure management schemes they can have on
21 their farms, and as a result I have gotten a little
22 bit involved in the Livestock Management Facilities
23 Act and communicating that back and forth with
24 farmers.

1 I would like to take the opportunity to
2 present some of my opinions, if you will, on the
3 Act. Realize they are my opinions. Whether or not
4 that carries a lot of weight, I don't know, but
5 hopefully it will.

6 Thank you to the Board Members and
7 distinguished guests for the opportunity to testify
8 on the Livestock Management Facilities Act. I feel
9 that the intent of this Act was to ensure that
10 livestock production in Illinois would have the
11 least amount of environmental impact that can be
12 achieved in an economically effective manner. This
13 intent can be legislated only to a certain extent
14 without driving livestock production out of the
15 state or into the management of those who can
16 afford the required system changes. I don't think
17 these results are what anyone in Illinois wants to
18 happen.

19 One thing that must be remembered during
20 the rulemaking process is that the environment we
21 wish to protect is a part of nature and natural
22 processes. No matter how hard farmers, Extension
23 workers, legislators, or regulating agencies try,
24 natural processes such as the weather, bacterial

1 decomposition of manure, and plant growth cannot be
2 legislated.

3 Manure management, like weather
4 prediction, is not an exact science. Oftentimes
5 what we try to do is measure with a micrometer even
6 though we are chopping it off with an axe. That
7 just does not equate. We cannot predict when
8 conditions will be right to cause purple
9 sulfur-fixing bacteria populations to multiply in
10 new lagoons and help control odor emissions.

11 We can, however, encourage those
12 bacterial populations by managing the timing and
13 mixture and the amount of raw manure and dilution
14 water added to the lagoon throughout its life. In
15 agriculture, we call these methods of biological
16 encouragement Best Management Practices.

17 Lagoons function best when they are "fed"
18 approximately equal amounts of manure and dilution
19 water in small, frequent doses.

20 There are several different things that
21 you can mess up there. Too much manure versus the
22 dilution water, too much dilution water versus
23 manure, too large a dose at any one time can upset
24 the biological activity in a lagoon.

1 There are livestock management facilities
2 in existence, and I predict there will be designs
3 in the future, that do not have manure management
4 systems that are conducive to proper lagoon
5 management. That is not to say they are
6 environmentally hazardous, just that they do not
7 work well as lagoons. They do, however, work well
8 with the management style of the producer who
9 chooses them.

10 Some of these include designs with
11 earthen storages, which are not designed to have
12 dilution water or bacterial treatment of the
13 waste. These earthen storages can extend the
14 number of days between required spreading on
15 croplands that the producer needs to have in the
16 event of weather conditions or any other types of
17 delays that might prevent him from being able to
18 apply the waste.

19 Earthen storages, as I said, are not
20 environmental disasters. Properly sized and
21 managed earthen storages hold manure in a more
22 concentrated form that is actually higher in value,
23 from a nutrient standpoint, than lagoon water.
24 These storages are nearly always smaller than

1 lagoons and would better lend themselves to some
2 odor mitigation techniques that would be cost
3 prohibitive for structures that are the size of
4 lagoons.

5 If the producers are required to size all
6 in-ground storages as they would be required under
7 the lagoon standards, as have been suggested at
8 some hearings, the added unnecessary expense may
9 prevent entry into the livestock production by
10 smaller family farms that couldn't afford to build
11 the larger structures.

12 In many of the manure management systems
13 today, the lagoon sized storages, if you took what
14 was originally worked into the system as an earthen
15 storage, a smaller structure, as A.G. mentioned
16 earlier, and required that producer to size it
17 according to the lagoon size standards, but without
18 educating him on proper management of that new or
19 different management scheme, you could have
20 yourself a big problem. Because now instead of
21 having a small structure that he has to haul out of
22 yearly to accomplish his manure management, he
23 would have a hole in the ground sitting there that
24 may hold six, seven or ten years worth of his

1 production with no treatment.

2 And I think this is what A.G. was getting
3 at earlier. There are a lot of holes in the ground
4 out there that are termed as lagoons that are not
5 operating as such. If you require those producers
6 to size something according to the lagoon size
7 standard, all you are doing is increasing the size
8 of the mess he has on his hands or the potential
9 mess that he has on his hands. If you make those
10 things bigger, the storage structures bigger, the
11 farmer will simply go longer periods between
12 spreading, and possibly have greater odor concerns
13 as a result.

14 However, I think the same siting,
15 registration and setback requirements should be
16 required for these structures as with lagoons.
17 Because although you don't have the vast quantity
18 of waste out there, you still have it in a
19 concentrated form. While there is more tendency
20 for that form to better seal the ground because
21 there are more solids associated with that, there
22 is still the amount of nutrients that is out there
23 that can cause a problem.

24 Switching gears and talking about

1 cropland and nutrient management, the same cautions
2 about regulating biological processes applies when
3 considering rules for applying manure to
4 croplands. The use of manure on crops is one of
5 the oldest recycling projects in history. Manure
6 is a valuable crop fertilizer. It provides the
7 three essential plant nutrients; nitrogen,
8 phosphorus and potassium. Manure also improves
9 soil structure and increases soil organic matter
10 content.

11 Agronomists and engineers have developed
12 estimates of manure nutrient content for a variety
13 of livestock types, ages of animals, and manure
14 storage systems. These estimates were arrived at
15 through years of practical studies of production
16 animals and are available to producers in tabulated
17 form in such references as the Livestock Waste
18 Facilities Handbook from the Midwest Plan Service,
19 which I believe is referenced in the Act and in the
20 rulemaking process so far, and in the Illinois
21 Agronomy Handbook, which I have a copy of today.

22 They both list out some table values,
23 tabular values and the amount of manure produced
24 and the amount of nutrients that is likely to be in

1 that manure. Both of these references estimate
2 crop nutrient needs for varying yield levels, so
3 farmers can estimate what their production level
4 will be and how much manure might be applied in
5 order to reach that production level and achieve
6 that with the nutrients that are available. These
7 estimates can be used to adjust manure applications
8 for the manure management planning.

9 My own experience with these book values
10 for manure production would suggest that the
11 estimates are rather conservative from a structure
12 design standpoint. In other words, they tend to
13 over estimate manure production. Therefore, I
14 would recommend that producers keep accurate
15 records following the initial year of the manure
16 management plan so they will know how much manure
17 they need to spread from year-to-year.

18 They should also conduct manure analyses
19 for the first few years at spreading time so they
20 will have a handle on the nutrient concentration in
21 their manure. This will allow them to better meet
22 the needs of their crops. After several years --
23 excuse me -- after several samples show a narrow
24 variation in nutrient concentration, perhaps

1 sampling could fall off to once every three to four
2 years, assuming that they do not make any changes
3 in their operation or their management scheme that
4 would cause changes in the nutrient concentrations
5 in the manure.

6 Again, I must emphasize that this is not
7 a cookbook formula. Weather, management changes,
8 and other site-specific situations may make
9 management of the manure handling system more
10 important than what regulators decide in their
11 offices. Legislating that a certain set of Best
12 Management Practices must be used by all producers
13 would put most at a disadvantage since all
14 practices do not work well in all production
15 systems or with all producers.

16 Talking about odor control, there are
17 some practices currently being investigated as
18 methods of reducing manure odor from livestock
19 production facilities. The use of some compounds
20 in feed and in manure storages have been effective
21 in some situations, but not in all. Additionally,
22 the use of solid settling tanks to reduce lagoon
23 solid floating have been effective in lowering
24 lagoon startup odors.

1 In some cases trees have been used
2 successfully to channel winds away from manure
3 storages and odors away from homes. A variety of
4 covers for manure storages are currently on the
5 market, but most are extremely high in price or add
6 additional solids to the lagoon to be hauled out
7 later.

8 Are these methods needed in every
9 operation? I would have to say no. They may have
10 applications in some extreme cases. I would also
11 add that rules governing the Act must allow there
12 to be flexibility in the design and management of
13 the facility to encourage development of effective
14 new technologies for the control of odor and the
15 treatment of livestock manure. Such examples would
16 be wetlands, the use of wetlands as a method of
17 treating livestock waste and/or runoff, and the use
18 of composting should be addressed and allowed
19 within the ramifications of the Act.

20 Thank you for allowing me the opportunity
21 to address the Board concerning the management of
22 livestock manure handling systems. I believe that
23 the Act adequately addresses the environmental
24 concerns of the citizens of Illinois.

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you, Mr. Campbell.

3 Are there any questions from the audience
4 for Mr. Campbell?

5 Any questions from the Board?

6 Okay. Then I would like to take a quick
7 five-minute break.

8 (Whereupon a short recess was
9 taken.)

10 HEARING OFFICER LOZUK-LAWLESS: Back on
11 the record.

12 The next witness we are going to hear
13 from is Julie Maschoff. Is that the correct
14 pronunciation?

15 JULIE MASCHOFF: It is Maschoff.

16 HEARING OFFICER LOZUK-LAWLESS: Okay.
17 Maschoff.

18 Could you please swear in the witness.

19 (Julie Maschoff was sworn in by
20 the court reporter.)

21 HEARING OFFICER LOZUK-LAWLESS: Begin,
22 please.

23 JULIE MASCHOFF: Thank you. As you said,
24 my name is Julie Maschoff, and I am a pork producer

1 from Carlyle, Illinois. I guess you could say I
2 have my business the old-fashioned way; I married
3 it.

4 (Laughter.)

5 JULIE MASCHOFF: I am a fourth generation
6 farmer. I grew up on a dairy, livestock and grain
7 operation in a neighboring county. My parents
8 farmed. My grandparents farmed. My great
9 grandparents farmed. And my husband has the same
10 list of credentials.

11 My family still is very active. My
12 brother runs our family dairy operation. My sister
13 is married to a farmer. Most of my aunts and
14 uncles farm and, therefore, I feel my credentials
15 are that I do know about family farms.

16 I would like to thank you for allowing me
17 to speak to you this afternoon. I certainly
18 commend you for your diligence and your
19 perseverance in holding these hearings. I really
20 applaud your efforts to find out the truth about
21 the Livestock Management Facilities Act and the
22 impact it is going to have on farms, the actual
23 need for the regulations, as you listen to the
24 different testimony throughout the state.

1 farmers. It allowed pork producers at that time to
2 pool all of their feed orders together and the
3 different supplies needed so they could buy things
4 at the lowest price, because they would have volume
5 purchasing.

6 That co-op is still in existence today.
7 Most of the families still belong to that local
8 buying co-op, and that is part of a larger state
9 organization called Midwest Co-ops. Some of the
10 people you have heard from may well have talked to
11 you about this or have been members of this.

12 In 1979 Wayne and Marlene formed that
13 infamous farm corporation, and the purpose was
14 really just to allow their two sons, who had just
15 graduated from college, a chance not only to farm
16 with them but to buy into the farm. It was a
17 method of passing on the ownership of the
18 business.

19 After evaluating the return on investment
20 that we would have gained from investing in more
21 land and having a larger grain operation versus
22 pork production, the family decided to expand the
23 pork operation of the family operation in order to
24 support three more families. And to this day we do

1 support four generations on that same farm.

2 Today Maschoff Pork Farm is still owned
3 by Ben Maschoff's grandsons. It is my husband, Ken
4 and I, and my husband's brother Dave and his wife
5 Karen. We are the management team. We are there
6 every day. We live there and work there every
7 day. We have continued our tradition of working to
8 provide an opportunity for the next generation to
9 farm or work in production agriculture.

10 When we look at the next generation we
11 think of not only the combined seven children in
12 our two families, but also the children of our
13 employees and to give them an opportunity to work
14 in production agriculture. Our family has made a
15 commitment to continue to adopt the latest
16 technology available as soon as it is feasible in
17 order to continue to produce pork in the most
18 environmentally responsible manner possible. That
19 has been our mission statement and the standard we
20 have adhered to for the past 18 years.

21 To carry out that goal our family has
22 gone from continuous farrow to finish operations, a
23 term I think you have heard in the last few weeks,
24 to a three-phase bio secure production site. As I

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1 go through this, if I am using terms that you are
2 uncomfortable with, you may feel free to ask me to
3 clarify or jot them down and we can talk about them
4 later.

5 We have recently, just in the last year,
6 established contracting networks. This has been to
7 allow us to bring in new family farms as partners
8 in our pork operation and it also allows us to keep
9 animals at smaller isolated production sites
10 through a much larger area. So they are disbursed,
11 they are isolated, and we don't have some of the
12 problems that some of our veterinary experts talked
13 about earlier with disease. We do want to keep
14 small units at a production site. That is the most
15 feasible and the most environmentally friendly.

16 We have long realized the value of a
17 nutrient management plan. In fact, tomorrow
18 morning I will once again meet with our soil
19 consultant, an agronomist from Mt. Vernon, and will
20 conduct our review of our nutrient management
21 plan. We do this almost quarterly. We look at it
22 in the winter, when we are planning out our
23 cropping plan for the spring. We look at it when
24 we are actually putting the crop in the ground, in

1 case there have been any changes due to weather and
2 planting schedules. We look at it when we are
3 looking at applying the manure to growing crop, and
4 we look at it after harvest when we are taking the
5 soil samples again.

6 Our goal is to make sure that our plan
7 continues to meet all of the environmental
8 requirements and we also want to assess the savings
9 that we have gained by applying manure as a
10 nutrient resource, as a fertilizer source. We need
11 to attribute that value to the grain operation. We
12 also review the nutrient management plan to assess
13 the implications of the new livestock regulations.
14 And, yes, it is a lot more paperwork.

15 Our commitment to the environment extends
16 beyond the farm. We do try to do volunteer work as
17 much as possible. I have served on the National
18 Pork Producers Council Environmental Task Force for
19 three years. I have also worked with producer
20 groups here in Illinois to conduct livestock waste
21 management workshops for -- I think we did two or
22 three years in a row. We did them around the state
23 and allowed producers of various livestock entities
24 to come meet together and talk with experts and

1 begin to evaluate how manure can be utilized the
2 most effectively in any farm operation.

3 As we head into 1997 and our 58th year of
4 business, I am very pleased to say that our family
5 farm operation is a very stable and viable business
6 that offers opportunities to our children as well
7 as other pork producer families. We continue to
8 adopt the latest technology. We have established
9 our own boar stud and AI lab, which is an
10 artificial insemination lab, and this AI lab
11 provides the semen that we use in our own sow
12 operation as well as semen for 16 other independent
13 family pork operations located throughout Central
14 Illinois.

15 We have gone from the continuous flow
16 operation that I mentioned earlier to three-site
17 production, to now exploring two-site production,
18 all within the last six years. Our growth has
19 allowed us to move long-term employees up into key
20 manager positions, and they supervise over 30
21 employees in the areas of pork production, grain
22 operation, farm construction, and the AI lab and
23 semen processing.

24 We estimate there are another two dozen

1 individuals who are employed in support areas, such
2 as transportation, feed processing, feed hauling,
3 additional farm construction at contract sites and
4 farm supplies. In addition, local grain farmers in
5 our two county area have one more market for their
6 corn. Generally it means another eight to ten
7 cents a bushel over prices many central Illinois
8 farmers would be receiving at their local
9 elevator.

10 As our farm family has grown and
11 prospered so have probably 60 other families. Our
12 commitment to our family business is a commitment
13 not only to business but to our families and the
14 families that our business relies upon. We
15 strongly believe that agriculture has evolved into
16 a profession. It is a profession based on science
17 as much as possible but also built by families just
18 like ours. And we are just one more family who
19 have taken our grandparents' way of life, our
20 parents' vocation and our generation's technology
21 and managed to evolve it into today's business we
22 call farming.

23 I am hoping my testimony today provides
24 you a glimpse of what today's family farm may look

1 like and, again, if I can clarify any of my
2 statements, I would be happy to do so at this
3 time.

4 Thank you for your attention.

5 HEARING OFFICER LOZUK-LAWLESS: Thank
6 you, Mrs. Maschoff.

7 Are there any questions for Mrs. Maschoff
8 from anyone in the public?

9 MR. HARRINGTON: If I could have just a
10 moment.

11 HEARING OFFICER LOZUK-LAWLESS: Yes.

12 CHAIRMAN MANNING: While he has just a
13 moment, I will ask a question.

14 Thank you for your testimony. You
15 mentioned that your family is committed to
16 utilizing new technologies as soon as they become
17 feasible, I believe you said. Could you mention
18 some of those, what you are considering to be new
19 environmental technologies, in terms of your
20 operations?

21 JULIE MASCHOFF: We constantly evaluated
22 various manure application equipment, manure
23 treatment products. We have worked with
24 universities as well as private companies in

1 evaluating different products. Some work in
2 certain situations, in certain type buildings, and
3 others it is very hard to evaluate.

4 We have changed our manure practices so
5 that we now incorporate manure, so that it is taken
6 from the building via a hose into a tank, and then
7 from the tank transported to the field and
8 immediately knifed under the soil so we never
9 spread on top. That is something we have realized
10 more in the last two years than ever before how
11 important that is.

12 We use an underground network of PVC
13 pipe. PVC pipe is an eight-inch heavy, plastic
14 pipe similar to sewer grade industrial type pipe.
15 Those pipes are buried from production centers out
16 to nearby fields so the manure is pumped to the
17 fields underground without having to transport it
18 over a township road. Those are just two areas I
19 could think of in addition to the AI lab, for
20 example, that I mentioned.

21 CHAIRMAN MANNING: Do you have lagoons at
22 your operation?

23 JULIE MASCHOFF: We have lagoons and deep
24 pit buildings. We have the buildings that Wayne,

1 my father-in-law, first filled back in the late
2 1950s, early 1960s, still in operation that are
3 functioning just fine.

4 CHAIRMAN MANNING: Are there odor
5 concerns that have been raised regarding your
6 operation?

7 JULIE MASCHOFF: I think there is odor
8 concerns at all operations. We try to be very
9 careful to do what we can to minimize any concerns
10 that might arise.

11 CHAIRMAN MANNING: What are some of those
12 things?

13 JULIE MASCHOFF: Some of them are what I
14 just mentioned to you, the fact that you are
15 incorporating instead of spreading on top.
16 Adhering to the best management practices that
17 several of your other expert witnesses have talked
18 about.

19 We have long felt that lagoons, when
20 properly managed, are the best way to treat
21 manure. The key there, of course, is getting that
22 right mixture of water and manure incorporated
23 together. I don't know how much detail you want
24 all of the time, because you have heard so much

1 today.

2 CHAIRMAN MANNING: We have, and we have
3 yet to hear more. But thank you very much for your
4 testimony.

5 HEARING OFFICER LOZUK-LAWLESS: Any other
6 questions from the Board?

7 Okay. Mr. Harrington.

8 MR. HARRINGTON: I believe you mentioned
9 that you prepared a waste management plan for your
10 facility. Do you know approximately how long that
11 took you?

12 JULIE MASCHOFF: Well, so far, we have
13 spent over \$2,500.00 this month to bring in someone
14 to work with us to make sure that it will adhere to
15 any guide -- to the guidelines, however they may be
16 interpreted. And I have personally spent three
17 days working just on the plans. And they are very
18 detailed. We are trying to address every
19 scenario.

20 We have called in some consultants from
21 the Animal Environment Specialists, a company that
22 consults out of Indiana who have had a lot of
23 experience in Iowa and Minnesota and other Midwest
24 states, to work with us in designing a plan that

1 looks at every single building, the animals in that
2 building, the type of manure production that can be
3 estimated in those buildings, where that manure is
4 stored, where the manure is applied on fields,
5 every field is listed and tracked.

6 We have gone back three years to look at
7 where manure has been applied, the type of cropping
8 rotation on those fields, and then projected it out
9 to the year 2000 what type of cropping rotation we
10 may be using to anticipate where that manure will
11 be going in the future. That is probably just the
12 first three sections of the plan.

13 MR. HARRINGTON: How large is your
14 operation, say, in terms of hogs shipped?

15 JULIE MASCHOFF: We have a 4,500 sow
16 operation on the home farm now. It used to be
17 continuous farrow to finish, but with the change in
18 technology that we have felt we needed to make to
19 be competitive, we have taken our buildings and
20 gutted the interiors and changed it over to
21 farrowing. What does that mean to you, 4,500 sows,
22 1,800 animal units.

23 CHAIRMAN MANNING: Very good. That was
24 the quickest I have heard a conversion of anyone in

1 any proceeding.

2 JULIE MASCHOFF: Divide by half and then,
3 you know, take another ten percent or so, and you
4 can -- that's accurate. If I were estimating I
5 would always just split it in half and get a rough
6 ballpark figure.

7 But at a separate site we have moved
8 our -- let me start from the beginning. After the
9 pigs leave the farm at two weeks of age, about ten
10 pounds, they are transported to a separate nursery
11 site, and that's over a quarter mile away. It has
12 its own lagoon system there. There are 20,000
13 nursery spaces in different buildings but, again,
14 that is only 600 animal units because those animals
15 are kept there just from 10 to 50 pounds.

16 Then at 50 pounds we move them again to a
17 finishing site and, again, it is a totally separate
18 location. Every time you move that animal you are
19 moving them into a building that has been cleaned
20 and disinfected, so you are moving them into a
21 disease free environment. That means as producers
22 we have less cost of production because we are not
23 spending our money on animal health products that
24 that animal may need if they stayed in a continuous

1 flow operation. By breaking that disease cycle
2 through these movements we are providing a much
3 more quality assured product.

4 So then we go to a finishing site that
5 has 10,000 spaces and that would be 4,000 animal
6 units but, again, it is a separate site and a
7 separate manure treatment center.

8 CHAIRMAN MANNING: Did I understand that
9 when you move them you move them to a totally
10 cleaned facility?

11 JULIE MASCHOFF: Yes. It is called all
12 in all out production. As I said, it is a
13 three-site production system. That has been the
14 industry trend for the last three to four years.
15 Actually, longer than that. It has been more
16 common in the last three to four years. It has
17 been pioneered for probably ten years.

18 The industry is now looking at a two-site
19 production, where animals would only be moved once
20 to reduce the stress on the animal and also reduces
21 the labor requirements tremendously. But that's
22 only been tested by very few farmers here in the
23 U.S.

24 CHAIRMAN MANNING: Okay. Thank you.

1 MR. HARRINGTON: Is there a difference in
2 the manure that is produced at each of the sites
3 under the three-site operation which is typical?

4 JULIE MASCHOFF: You have to remember
5 what goes in comes out. You are feeding each of
6 these animals a very different ration. Our animals
7 receive over 26 different rations from the time
8 they are born to the time they are finished. So at
9 each phase -- at each particular stage of
10 production, I should say, you are having a very
11 specialized ration fed.

12 So the nutrient content is going to be
13 different. Obviously, we have to keep a file to
14 test the different lagoon cells at each production
15 site, because it is going to vary based on what
16 type of animal is kept there. And, obviously,
17 different sized animals excrete different amounts
18 of manure. I would let an animal scientist tell
19 you how much, because it is kind of boring
20 numbers.

21 MR. HARRINGTON: You mentioned that you
22 purchased a good deal of feed locally; is that
23 correct?

24 JULIE MASCHOFF: Right. All corn is

1 produced locally. Although we farm over 1,200
2 acres, we can supply only a fraction of the corn
3 needs, so we purchased, two years ago, what was the
4 equivalent of ten percent of the corn produced in
5 our county or five percent from the two county
6 area.

7 And I can say that eight to ten cents per
8 bushel is guaranteed because we pay a premium to
9 local farmers for bringing us the corn to our farm
10 versus the local elevator. Our local elevators
11 already have competitive bids because we are on a
12 railway system and close to the river terminal in
13 St. Louis. So our bids are more competitive than
14 they would be in Central Illinois. We have to
15 compete for that grain, and so we have to pay more
16 for it, is what it boils down to.

17 MR. HARRINGTON: You did a wonderful job
18 on the animal unit calculation.

19 JULIE MASCHOFF: I have to write it down
20 or I won't remember it. It is one of those little
21 cheat sheets that you carry with you.

22 MR. HARRINGTON: One of the things is --
23 there has been a lot of confusion about animal
24 units here. Maybe you can help on this. In the

1 farrowing operation, that is basically the sows
2 and --

3 JULIE MASCHOFF: Gestating sows. Let me
4 show you these charts. These are conversion
5 tables.

6 CHAIRMAN MANNING: Oh, good. We will
7 take one of those.

8 JULIE MASCHOFF: This is going to be kind
9 of a real quick reference. It just allows you to
10 always say, okay, you know, people say, well, can
11 you define your operation in terms of sow units.
12 We are starting to change that in the industry of
13 weight of pork produced. But a lot of farmers
14 still define their operation in terms of how many
15 acres and also how many sows. And there is just
16 some real typical numbers of sow farms or sow farm
17 sizes maybe that will help you.

18 As I said, the industry technology has
19 changed so much in the last three years that you
20 need to look at this carefully and realize that
21 this farrow to finish operation is not the standard
22 anymore. Today's standard is a 2,500 -- well,
23 actually that wouldn't be quite that large.
24 Normally you have a 1,200 sow operation, for

1 disease control reasons at one site, and those pigs
2 would be moved at two weeks of age.

3 So in that sense your 1,200 sow operation
4 needs to be considered in the same column as the
5 finishing pigs. So whenever you have a sow farm
6 that moves those pigs out at an early weaned age,
7 you need to be looking at treating that sow as a
8 finishing pig. The other thing to remember is that
9 a sow will spend three months in gestation waiting
10 to have those pigs. At that time feed is limited.
11 It is kept on a carefully controlled diet so it
12 doesn't overeat at all.

13 So the manure production is even less.
14 The amount of manure excreted during the gestation
15 phase is much less than the finishing phase, but we
16 are still putting it in -- we have to put it in the
17 same category because of the weight. Does that
18 help or is that --

19 CHAIRMAN MANNING: What is the average
20 number of piglets per litter?

21 JULIE MASCHOFF: Per year?

22 CHAIRMAN MANNING: Per litter.

23 JULIE MASCHOFF: Per litter. Ours is
24 over ten. We average 25 pigs per sow per year and

1 that's among the probably top five percent in the
2 country.

3 CHAIRMAN MANNING: Okay. That was very
4 helpful, too. Thank you.

5 HEARING OFFICER LOZUK-LAWLESS: Mr.
6 Harrington, do you have anything else?

7 MR. HARRINGTON: At what age do you wean
8 piglets?

9 JULIE MASCHOFF: The pigs are moved to
10 the off-site nursery at 14 to 16 days of age, and
11 that is around 9 to 11 pounds. It varies. We
12 don't move pigs on Sunday, so we have a break in
13 there.

14 MR. HARRINGTON: When you calculate the
15 animal units for the sows with their piglets, do
16 you discount the sows?

17 JULIE MASCHOFF: We just figure the sows
18 because the pigs are just so small, and they are in
19 there such a brief period of time that the bulk of
20 that farm is gestating sows and only 400 have pigs
21 at any one time. So we don't count the pigs when
22 we consider our units at the home farm. We are
23 still talking 1,800 animal units so we -- you know,
24 an 8 pound pig is not going to add a whole lot.

230

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you. Let the record reflect that the animal unit
3 conversion table has been marked as Exhibit Number
4 44.

5 (Whereupon said document was
6 duly marked for purposes of
7 identification as Exhibit
8 Number 44 as of this date.)

9 HEARING OFFICER LOZUK-LAWLESS: Mr.
10 Harrington, are you finished?

11 MR. HARRINGTON: Yes, I am finished.
12 Thank you.

13 HEARING OFFICER LOZUK-LAWLESS: Dr.
14 Girard.

15 BOARD MEMBER GIRARD: Thank you. I have
16 a question in relation to controlling odor in your
17 waste lagoons. Have there been any handbooks or
18 scientific articles or experts that have been
19 particularly helpful with techniques, or has most
20 of your success come through experience?

21 JULIE MASCHOFF: Well, everybody is an
22 expert when they get 50 miles from home, and we
23 have had lot of people from out-of-state come to
24 help.

1 (Laughter.)

2 JULIE MASCHOFF: We have had to use trial
3 and error. We read every industry publication. We
4 attend a lot of workshops in the state and around
5 the country. We talk to producers before we try
6 anything. I talk to -- I used -- I had four
7 producers in Iowa given to me as a reference before
8 we tried a new product just this past autumn. It
9 is a lagoon and pit additive. What it basically is
10 is a mixture of enzymes used to feed the bacteria
11 to enhance the breakdown to speed up the process of
12 breaking down the manure and eliminating the
13 particles that create part of the odor.

14 We think that is starting to help
15 alleviate problems that we have had at one site.
16 So much of it is related to temperature and
17 humidity and just the natural process that it takes
18 for a lagoon to mature and function in its proper
19 manner. Most lagoons are so much more effective
20 after two years than they are the first six months,
21 because of the loading factor. It just takes
22 awhile for that manure to breakdown, for the
23 biological enzymes to work, for the bacteria to
24 work.

1 BOARD MEMBER GIRARD: Okay. So in terms
2 of odor --

3 JULIE MASCHOFF: In terms of odor, we
4 have tried a lot products.

5 BOARD MEMBER GIRARD: -- your worst
6 problem is in the beginning when you are loading a
7 lagoon?

8 JULIE MASCHOFF: Yes, they have been.

9 BOARD MEMBER GIRARD: Okay.

10 HEARING OFFICER LOZUK-LAWLESS: Mr.
11 Goetsch, do you have a question?

12 MR. GOETSCH: I think earlier you
13 mentioned that because of the different rations
14 that you feed at the different areas, that you have
15 to sample each lagoon. Could you describe the
16 frequency of sampling and how you go about
17 obtaining samples from your lagoons?

18 JULIE MASCHOFF: Our soil consultant
19 actually does the samples for us by agitating an
20 area and taking a sample, a representative sample
21 from different phases, different areas of one
22 lagoon. He agitates to get a representative
23 sample. And we sample the lagoons every year that
24 we are going to apply that manure onto crop land.

1 So that's a matter of record.

2 We have found that there really isn't a
3 tremendous change in the nutrient value of that
4 manure year after year once a lagoon is fully
5 functional. But the first couple years there may
6 well be a difference in some of the nutrient
7 levels.

8 MR. GOETSCH: Do you notice a great deal
9 of odor increase when this localized agitation is
10 done prior to sampling?

11 JULIE MASCHOFF: Not really, because they
12 are not close enough for me to ever smell it. I
13 mean, it is a quarter mile away, so we don't know
14 if someone is out there stirring it up or not.

15 MR. GOETSCH: Thank you.

16 HEARING OFFICER LOZUK-LAWLESS: Okay.
17 Mr. Taylor.

18 MR. A.G. TAYLOR: Julie, how soon or much
19 in advance of the time you apply the manure could
20 you sample the manure?

21 JULIE MASCHOFF: As closely to the
22 application as possible. We can get turnaround
23 service probably three days before we apply,
24 because it is not relevant to do it months ahead.

1 A change in temperature could create differences,
2 so we want to have the most current representative
3 sample taken as close to the time of application as
4 possible.

5 MR. A.G. TAYLOR: Two more questions.
6 Would you mind divulging the approximate cost of
7 having a sample analyzed?

8 JULIE MASCHOFF: We have used Brookside
9 Lab in the past. I can't tell you what their
10 sampling was because we do so many other samples
11 and other testing there. The Animal Environment
12 Specialists have told me they can guarantee 48 hour
13 manure sampling results I think for around \$50.00
14 per sample.

15 MR. A.G. TAYLOR: Okay.

16 JULIE MASCHOFF: I mean, I thought that
17 was a little high for shipping manure samples just
18 to find out it is just about the same as last
19 year. That can be kind of steep.

20 MR. A.G. TAYLOR: One last question.
21 Have you ever sampled the manure as you were
22 applying it to see if the concentrations of the
23 nutrients would be consistent with samples from the
24 lagoon?

1 JULIE MASCHOFF: I am not sure if that
2 has been done or not. I would have to check with
3 Ken and Dave, because they are out in the field.

4 MR. A.G. TAYLOR: Thank you.

5 HEARING OFFICER LOZUK-LAWLESS: Mr.
6 Harrington.

7 MR. HARRINGTON: A couple of follow-up
8 questions. Is yours one of the largest operations
9 in the state, the total operation?

10 JULIE MASCHOFF: Possibly.

11 MR. HARRINGTON: Would you consider
12 yourself a leader in the industry?

13 JULIE MASCHOFF: Perhaps by some
14 standards. We don't -- we probably don't do as
15 much for farm organizations as other families. It
16 just depends on what you consider --

17 MR. HARRINGTON: A leader in the
18 application and development of technology and --

19 JULIE MASCHOFF: Perhaps in the sense
20 that we have an awful lot of people calling us and
21 asking us what we are doing and what has worked for
22 us we may be considered a leader.

23 MR. HARRINGTON: Do you have any
24 knowledge of the development of the pork industry

1 in North Carolina?

2 JULIE MASCHOFF: I have visited with
3 people and have visited at North Carolina with
4 various individuals in that industry.

5 MR. HARRINGTON: Could you briefly tell
6 us what your understanding is of how North Carolina
7 grew in the pork business?

8 JULIE MASCHOFF: Well, my husband and I
9 have this joke about how family pork producers have
10 been lost in North Carolina as corporate giants
11 have taken over, and it is funny because 15 years
12 ago there were no pork producers in North
13 Carolina. It was a tobacco state.

14 The Dean of the College of Agriculture at
15 North Carolina State has told us that when they
16 realized that tobacco was a dying cash crop and an
17 industry that just wasn't going to be feasible for
18 the next generation, they had to -- they were very
19 concerned with how to keep their family farms
20 operating.

21 They had limited acreage and they needed
22 a cash crop that was very lucrative compared to
23 tobacco, and they came up with the pork industry.
24 They had a model in the poultry industry. The

1 Extension Service and the University people and
2 various factors in North Carolina's economy decided
3 that pork production was going to be a model that
4 farmers could adapt and utilize to make sure that
5 they can keep their farms in their families.

6 So in a sense it wasn't just Wendell
7 Murphy waking up one day and saying, you know, I
8 think North Carolina ought to be filled with pigs.
9 There was a consortium of academic and
10 government -- the North Carolina State legislature
11 okayed a lot of funds for this, in the sense of,
12 you know, proposing studies and allocating people
13 on the task force. It was actually a governor's
14 task force that kind of helped create all of this.

15 HEARING OFFICER LOZUK-LAWLESS: Thank
16 you, Mrs. Maschoff. I think at this time it would
17 probably be best to go on to our final witness, Mr.
18 Frank.

19 BOARD MEMBER GIRARD: Could I ask just
20 one real quick question?

21 HEARING OFFICER LOZUK-LAWLESS: Okay.

22 BOARD MEMBER GIRARD: Is there a
23 consortium in Illinois of government, university
24 researchers, hog producers and others which are

1 driving the industry in Illinois in the same way as
2 in North Carolina?

3 JULIE MASCHOFF: At this point there
4 isn't a need for consortium to establish the
5 industry, because the industry is there. The
6 changes in technology, the evolution, is simply a
7 factor of -- probably a factor that accompanies any
8 maturing industry. As people realize -- as we
9 realize that we are going to have seven more
10 children that we would like to bring into our
11 business, our business cannot stay static, or
12 status quo. It has to evolve and change.

13 If we are going to change, we are going
14 to try to figure out what changes would be the best
15 in all factors of production, environment and, of
16 course, on the bottom line. So, no, we don't have
17 a consortium in that sense telling us what is
18 best. It is more of a network of people that we
19 contact and that contact us as to what works best
20 for you.

21 BOARD MEMBER GIRARD: Thank you.

22 CHAIRMAN MANNING: What factors do you
23 believe underlie the idea that there are
24 out-of-state corporations locating in Illinois in

1 the pork industry?

2 JULIE MASCHOFF: I am sorry. I don't
3 understand your question.

4 CHAIRMAN MANNING: I guess I am just
5 wondering for your reaction as to why there are
6 out-of-state corporations desiring to locate in
7 Illinois and produce pork?

8 JULIE MASCHOFF: Actually, we have not
9 seen that much. One of the reasons I have always
10 assumed was a factor was because we have high work
11 comp rates and higher unemployment rates than
12 neighboring states. There is a very independent
13 mind-set amongst Illinois farmers that tends to say
14 I want to continue to go alone.

15 As we have worked with contractors in the
16 last year we have found some exceptional
17 individuals, young, for the most part they are
18 farmers in the mid to late 30s, maybe early 40s,
19 and they usually have one or two teenage sons.
20 They want to run their own farm, but they don't
21 want the financial risk.

22 So they have the independent attitude and
23 the work ethic, but they don't want to bite off the
24 big financial risk, so they enter a contract

1 arrangement with us. So I am not real familiar
2 with as many out-of-state corporations coming in,
3 but if they are doing the same thing, they are
4 working with family farms and it is not a corporate
5 issue in the end after all.

6 CHAIRMAN MANNING: Thank you. It is not
7 that I have any independent knowledge of them,
8 either. It is just that we have a lot of citizens
9 raising those concerns on the record. That's why I
10 asked the question. Thank you.

11 HEARING OFFICER LOZUK-LAWLESS: Thank
12 you, Mrs. Maschoff.

13 JULIE MASCHOFF: Thank you.

14 HEARING OFFICER LOZUK-LAWLESS: Mr.
15 Harrington, do you want to move to the front table
16 and Mr. Taber?

17 MR. HARRINGTON: Our next witness is Mr.
18 Jim Frank, and he has prepared prefiled testimony,
19 which he will testify from. But I believe he has
20 some edits as he goes along. We will introduce the
21 testimony as an exhibit when he is done, because of
22 the attachments.

23 MR. JIM FRANK: Thank you, Madam Hearing
24 Officer. My name is Jim Frank. I am president of

1 Frank & Cowles Environmental Engineering
2 Consultants located in Springfield, Illinois. It
3 is a position I have held for four years.

4 I appreciate the opportunity to testify
5 before the Pollution Control Board today, and the
6 testimony I am giving is representing the Illinois
7 Pork Producers Association, the Illinois Beef
8 Association and the Illinois Farm Bureau.

9 I would like to first present my
10 qualifications prior to testifying. The firm of
11 Frank & Cowles Engineers specializes in
12 environmental issues relating to agriculture and
13 agribusiness. Technical areas of FCI work related
14 to my testimony today include:

15 Livestock waste management system design
16 and construction oversight.

17 Secondary containment design for
18 agrichemicals.

19 Study and remediation of agrichemical
20 facilities.

21 Use of landfarming to remediate sites
22 contaminated with pesticides, fertilizers and fuel,
23 including permitting with the Illinois Department
24 of Agriculture and the Illinois EPA.

1 Design of irrigation systems to land
2 apply fertilizer waste.

3 Designing earthen and synthetically lined
4 waste impoundments.

5 Designing and permitting sewage sludge
6 disposal to land systems.

7 I received a Bachelor of Science Degree
8 in 1971 and a Master of Science Degree in 1972,
9 both in Agriculture, from Southern Illinois
10 University at Carbondale. My graduate work and
11 thesis was in the area of livestock waste
12 management. My thesis dealt with the Design and
13 Evaluation of an Oxidation Ditch System for
14 Treating Swine Manure at the SIU Swine Farm.

15 Upon graduation I was employed by IEPA as
16 the Agency's Agriculture Advisor. In that
17 capacity, I worked on developing the first set of
18 Livestock Waste Management Regulations, which was
19 adopted by the Illinois Pollution Control Board as
20 part 501. I was also responsible for initial
21 hirings of field agriculture engineers and managing
22 the IEPA Livestock Waste Management Program,
23 including serving as an expert witness at
24 regulatory hearings and enforcement hearings.

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1 So I have a great deal of appreciation
2 for what Chet Boruff, Warren Goetsch and Scott
3 Frank have gone through in these deliberations in
4 trying to craft proposed regulations that everyone
5 is thrilled with. It is a big task.

6 Other responsibilities as Agricultural
7 Advisor included the working on the development of:

8 The Part 560 - Design Criteria for Field
9 Application of Livestock Waste.

10 Part 570 - Design and Maintenance
11 Criteria Regarding Runoff Field Application
12 Systems.

13 Part 391 - Design Criteria for Sludge
14 Application on Land.

15 I also served as Chairman of the IEPA
16 Agriculture Related Non-Point Source Water
17 Pollution Task Force. This task force developed a
18 state water quality plan for the control of surface
19 water pollution from feedlots, fertilizer,
20 pesticides, soil erosion, forestry, and orchard
21 operations. I was a member of the American Society
22 of Agriculture Engineers Committee on Livestock
23 Waste Management that developed the design
24 standards for Control of Manure Odor and setback

1 distances for confined livestock facilities
2 published by ASAE as publication EP379.1.

3 In 1979, I went to work at the IDOA as
4 the Superintendent of the Division of Natural
5 Resources. In that capacity I was responsible for
6 the development and implementation of programs
7 dealing with soil erosion, strip mine reclamation,
8 preservation of prime farmland and water resource
9 issues.

10 In 1984, I went back to IEPA to manage
11 the Remedial Project Management Section. In that
12 capacity I developed and managed the Federal
13 Superfund Program, the State Superfund Program,
14 Leaking Underground Storage Tank Program -- but
15 don't hold that against me.

16 (Laughter.)

17 CHAIRMAN MANNING: We were about ready
18 to.

19 MR. JIM FRANK: And Mobil Incineration
20 Program.

21 I have been working as an Environmental
22 Consultant for the last eight years. I have 25
23 years of natural resource and environmental
24 management experience and am the author of numerous

1 technical papers on several topics. I was raised
2 on a livestock farm in Marshall County, Illinois,
3 and currently maintain a pure-bred Angus beef
4 operation in Sangamon County.

5 I am preceded as a livestock farmer by my
6 great, great grandfather, great grandfather,
7 grandfather, and father dating back to 1856. And
8 my ancestors came from Scotland and Germany and
9 settled in Illinois. Therefore, I have livestock
10 waste management experience not only as a regulator
11 and as a consultant, but perhaps most importantly
12 from the handle of a pitchfork and the seat of a
13 tractor spreading manure.

14 I will now begin my testimony. The
15 industry coalition which I represent supports the
16 majority of Subpart C, Waste Management Plan of the
17 IDOA Proposal. We also are mindful that Section 20
18 of the Livestock Management Facilities Act requires
19 the development of a waste management plan for
20 facilities larger than 1,000 animal units.

21 We believe the requirement to develop a
22 plan adds system reliability to the proper
23 management of livestock waste. This requirement
24 goes a step further and builds on the requirements

1 of part 560 that was adopted by the Board over 20
2 years ago on April 15th, 1976. The industry would
3 like Part 560 to continue to be used as the design
4 criteria document against which applicable portions
5 of the waste management plans are reviewed.

6 The reasons for this position are as
7 follows:

8 Legislative intent. The Livestock
9 Management Facilities Act at Section 20 recognizes
10 Section 560 as an applicable document that must be
11 adhered to.

12 The Board adopted this criteria in a
13 regulatory proceeding over 20 years ago. It has
14 served the environment well and the technical basis
15 for its adoption has not changed. Limiting
16 application of livestock waste based on the
17 nitrogen agronomic rate is still the most valid
18 control mechanism and the one used most broadly
19 throughout the United States.

20 Table 1 of my testimony provides
21 information provided to me by A.G. Taylor, the
22 Agriculture Advisor for the Illinois EPA. In that
23 table, the category of Field Application shows that
24 over a ten year period there were 155 water

1 pollution problems reported by IEPA field staff
2 associated with field application of manure. That
3 equals 15.5 reported problems per year. Data is
4 not available to indicate whether any of these
5 problems were associated with incidents where the
6 Part 560 criteria was being followed. Based on my
7 experience while at IEPA, the majority of water
8 pollution problems associated with field
9 application occurred when the Part 560 criteria was
10 not being followed.

11 I will reference you in Table 1 to the
12 number 155. It is on that basis that I will walk
13 through a calculation.

14 In order to be conservative, I will
15 assume the 560 criteria was being followed and a
16 problem resulted. Let us compare that to the
17 number of facilities in Illinois where manure
18 spreading is practiced on at least an annual
19 basis. Table 2, included in my testimony, shows
20 the number of livestock farms in Illinois by year.

21 Taking a time-weighted average for 1985
22 through 1995, as contained in Table 1, excluding
23 sheep farms, we see that there were an average of
24 47,140 livestock farms in Illinois for those

1 years. Now let us assume that each farm only
2 spread manure one day per year, which is a very
3 erroneous and conservative assumption, since many
4 facilities spread manure many times per year for
5 several days each time.

6 Nevertheless, if we look at the
7 percentage of times water pollution problems were
8 reported by the IEPA compared to the number of
9 spreading times per year, it equals 0.033 percent.
10 If one assumes only half of the 15.5 problems per
11 year were associated with following the 560
12 criteria, and every livestock farm spread manure
13 only two times per year, the percentage equals
14 0.008 percent.

15 Based on this conservative analysis, I
16 believe the existing criteria are doing their job
17 in protecting the environment.

18 Even though this control strategy must
19 now be applied to larger livestock facilities than
20 were present or envisioned 20 years ago, the
21 strategy is still effective. Fortunately, when
22 Part 560 was developed and adopted it did not lock
23 in a control strategy that would become outdated if
24 more animal units were present at one facility.

1 Rather, the amount of land required to
2 apply the manure is based on two major variables;
3 the amount of nitrogen in the manure, and the
4 demand for the nitrogen by the type of crop and
5 crop yield. Since Part 506 -- that's a typo --
6 Subpart C, requires the actual amount of nitrogen
7 in the waste to be determined by laboratory
8 analysis, the concept is more refined than the
9 look-up table contained in Part 560. This is an
10 improvement in calculation accuracy for application
11 rates. Since Part 560 establishes nutrient uptake
12 on a yield and crop type basis this concept is
13 still valid.

14 Subpart C has added specific mechanisms
15 to document yields. Therefore, the environment is
16 protected as well by the Part 560 criteria for
17 large or small facilities. The manure produced per
18 animal is a constant, and the crop taking up the
19 nitrogen does not know or care what size facility
20 produced the manure containing the nitrogen.

21 One reason the industry is proposing that
22 we stay with the 506 design criteria in combination
23 with the --

24 HEARING OFFICER LOZUK-LAWLESS: Excuse

1 me, sir. Did you mean 506 design criteria or 560?

2 MR. JIM FRANK: Yes. I am sorry. Thank
3 you for that correction.

4 In addition to the statutory provisions
5 that have been discussed, is that producers need
6 these criteria now. There are deadlines for
7 developing waste management plans in both the
8 Livestock Management Facilities Act and the current
9 IDOA proposal in Subpart C at Section 506.306,
10 506.308 and 506.309 (c) dealing with nitrogen
11 availability, crop nitrogen requirements and
12 nitrogen credits respectively. The Department
13 proposes to adopt criteria later and independent
14 incident of this proceeding. Livestock producers
15 need to know now what these criteria are and should
16 not be expected to wait an undetermined amount of
17 time for this information.

18 The first two issues are currently
19 addressed in Part 560. Therefore, Part 560 should
20 continue to be utilized until such time as IDOA
21 proposes specifics revisions to Part 560 through a
22 separate Board proceeding. Specific language
23 changes to these three sections are provided in
24 Appendix A for the Board's consideration.

1 Let me summarize what I am saying. The
2 existing design criteria which the IEPA has adopted
3 and has been used for many years is not perfect. I
4 believe there are some refinements that can be made
5 to it by a new regulatory proceeding. The exact
6 nature of that proceeding as to whether those
7 design criteria are totally subsumed in a new IDOA
8 set of regulations, or preferably a new Pollution
9 Control Board set of regulations, those can be
10 worked out. But in the meantime we need something
11 now. Most of the questions that are begged by
12 having to prepare a waste management plan can be
13 answered by a combination of the existing statute
14 and the existing criteria. And until a new
15 regulation is developed by the Department and
16 proposed to the Board, we would like that stability
17 that has been there for 20 years and the people
18 understand.

19 Let me move now to the issue of organic
20 nitrogen degradation rate. Section 506.309 (b)
21 Nitrogen Credits specifies a three-year organic
22 nitrogen degradation cycle. The three years should
23 not be set in these regulations, but be set at the
24 future proceedings. I referred to this earlier

1 where the Department would propose amendments to
2 Part 560. The three-year degradation cycle
3 conflicts with the five year cycle already adopted
4 by the Board in Section 560.201 (e) and 391.411
5 (b).

6 I have, since preparing this written
7 testimony, been informed by Mr. Scott Frank with
8 the Department of Ag that it was their intention to
9 use a four year nitrogen cycle, but that still is a
10 deviation from current Board adopted criteria, so I
11 think it is better to stay with the five years
12 until such time as the Department demonstrates that
13 four years is better.

14 I would now like to move to a discussion
15 of Section 506.303, waste management plan
16 contents. I will be deviating from my prepared
17 remarks in that regard. Mr. Harrington is passing
18 out a document that I would like to have accepted
19 for the record to supplement my testimony. Some of
20 this follows questioning of Mr. Harrington of
21 IDOA's witnesses this morning. These are some
22 refinements we would like to see in 506.303. I
23 will give the refinement, as shown on the printed
24 exhibit, and then give the brief rational for

1 that.

2 The context of this discussion, again, is
3 the Livestock Waste Management Plan and its
4 contents. At (i) we would like to have the concept
5 of anticipated crops for the current year and the
6 anticipated crops for the next two years after the
7 current year interjected in this requirement. The
8 reasons are that weather, disease, crop prices and
9 other factors can affect the actual crops grown
10 and, therefore, this flexibility should be
11 allowed.

12 In (j) we would like to remove the word
13 optimum and replace it with the word targeted.
14 Continuing on with the sentence crop yields yield
15 goal, insert the word goal, which was not there
16 before, for each crop in each field, period. We
17 believe these two changes are appropriate because a
18 frequently used connotation of the word optimum in
19 agronomy and agriculture economics evaluates the
20 cost of inputs.

21 And in livestock waste management
22 systems, you do not have to value livestock manure
23 at the same rate as purchased commercial
24 fertilizers. Therefore, a producer should be able

1 to apply more nutrients so long as it is within the
2 agronomic nitrogen rate and thereby increase his
3 yield that he is targeting for and, thus, keep his
4 acreage less than would be required by some
5 definitions of optimum.

6 Let me give an example where this may
7 become quite critical. Let's say that a producer
8 is going to expand a lagoon system, and he already
9 has a deep pit system. He is going to expand it
10 significantly and buys an adjacent farm, which has
11 not had the benefit of livestock waste or
12 irrigation, and has been managed rarely poorly.
13 The yields for that farm may be very low. I will
14 just pick an arbitrary figure for corn; it might be
15 a 100 bushel an acre farm. Yet, this producer
16 should be able to show in his Livestock Waste
17 Management Plan that by the addition of the
18 irrigation technology, not only the manure but by
19 also irrigating fresh water from the ground and
20 adding solid manure or liquid manure, yields would
21 be increased significantly even in the first year.
22 And to saddle that person with a five year average
23 that we talked about in the testimony, is a
24 disservice to the cost that that person has to

1 spend to properly apply the manure.

2 Moving to (k) we would like estimated put
3 in before the word nutrient, to indicate two
4 things; that even the analysis performed annually
5 is really an estimate. I would refer you to
6 Section 506.305 in Appendix A for a further
7 discussion of this. In 506.305 (b) the main point
8 that is being made with this proposed change is
9 that we believe the most reliable method of
10 analyzing manure application is to do so during the
11 normal application of the manure. That is true
12 whether you are spraying from a lagoon or from a
13 deep pit or other methods. There is no good and
14 easy and efficient way to get the same system
15 reliability. Therefore, we would like the
16 requirement for analysis 60 days prior to the
17 application of the waste to be removed.

18 In (m) (5) it is just insertion of the
19 word targeted and goal, again, for the same
20 reasons. And in (m) (7) the insertion of the word
21 available. And this is so that allowable
22 volatilization losses can be considered as well as
23 mineralization of the nitrogen rates and anything
24 else that is relevant regarding what actual

1 available nitrogen is present.

2 The last one then in (r) trying to
3 further refine this issue of precipitation and what
4 is surface water. So after what is there now, the
5 provision that livestock waste may not be applied
6 in waterways, we propose the addition of the words,
7 which does not include small temporary
8 accumulations of water occurring as a direct result
9 of precipitation or irrigation and then continue on
10 with the verbiage that is in the rule.

11 I will now return to my prepared
12 testimony. And the balance of my testimony, just
13 to give you focus, is on the suggestion that the
14 Board adopt the nitrogen agronomic rate as the
15 control factor rather than a phosphorus rate, which
16 has been suggested by some parties, and I believe
17 the Board has asked for some testimony on that
18 point, and I intend to give it here.

19 The Department proposal at Section
20 506.302 (a) specifies that the nitrogen agronomic
21 rate is an acceptable basis for the preparation and
22 approval of a waste management plan. This language
23 is taken from 20 (f) of the Livestock Management
24 Facilities Act. However, the issue of whether to

1 use the phosphorus agronomic rate to control manure
2 applications was previously raised in the Livestock
3 Industry Task Force and in the emergency rulemaking
4 proceeding.

5 The testimony I will present is in
6 support of the continued use of nitrogen as the
7 control factor and in opposition to the use of
8 phosphorus as the control factor.

9 If phosphorus is used instead of
10 nitrogen, it will take approximately three times
11 the land area to spread the manure. This is
12 dependent on species, manure handling systems, and
13 crops grown. If the land area requirement is
14 increased by a factor of three, the cost of manure
15 management will increase significantly due to the
16 extra transportation and spreading cost.

17 This is a resource management issue, not
18 a water pollution issue. The Board has not
19 historically been in the business of controlling
20 resource management for regulated communities, and
21 this is not a good time to start that practice. I
22 will present several pieces of data and cite some
23 literature sources to make the point.

24 The central thesis of this testimony is

1 that manure applied phosphorus applied at rates
2 equivalent to agronomic nitrogen rates are not
3 surface or groundwater pollutants if the Part 560
4 criteria are followed. Part 560, Section 560.202
5 through 560.207 contain provisions for control of
6 soil erosion, proximity to water, flooding,
7 waterway application, frozen or snow-covered
8 ground, and application on saturated ground. These
9 provisions are similar or identical to Sections
10 506.303 of IDOA's proposal and Section 20 (f) of
11 the Livestock Management Facilities Act.

12 Phosphorus does not easily dissolve in
13 water. Phosphorus fertilizer water solubility are
14 further reduced when they are applied to the soil.
15 After application, phosphorus reacts to form
16 calcium, iron, or aluminum phosphates, which are
17 quite stable. For example, calcium phosphate has a
18 water solubility of 0.002 grams per 100
19 milliliter. Once these reactions occur, the
20 phosphorus is adsorbed, that is A-D-S-O-R-B-E-D, to
21 the soil particle or other organic matter, such as
22 the manure itself. Therefore, the phosphorus will
23 not leach out into the groundwater or runoff as
24 soluble phosphorus with surface water. There are

1 no measurable differences between the various
2 sources of phosphorus once land applied. Whether
3 from livestock manures or commercial fertilizers,
4 they all become relatively insoluble.

5 The principle transport mechanism to
6 surface water is through soil erosion. Section
7 560.202 governs the acceptable loss of soil.
8 Additionally, IDOA administers a soil erosion
9 control program through the Soil and Water
10 Conservation Districts in Illinois that regulate
11 soil loss to levels lower than 560.202 for many
12 soils. The United States Department of Agriculture
13 Federal Farm Program requires soil conservation
14 plans for each cooperating farmer. These plans
15 also serve to limit soil loss.

16 Section 560.203 of the current design
17 criteria prohibits application of manure within 200
18 feet of surface water. This is an adequate buffer
19 to control surface water pollution as shown by the
20 following research.

21 For purposes of brevity, I am not going
22 to quote this research. It is cited in the
23 appendices. But I will just paraphrase what the
24 first two pieces of research say. It basically

1 says with adequate buffer strips if you apply
2 phosphorus, or particularly phosphorus and manure,
3 that if you have 200 feet of buffer strip between
4 that location and the nearest stream or surface
5 water, the majority of phosphorus is attenuated in
6 that distance, thus, it is not a surface water
7 pollutant.

8 The last research cited by Cooke makes
9 the point that even with repeated long-term
10 moderate to high rates of manure application, the
11 phosphorus does not move down in the soil profile
12 to any great depth. Thus, if it doesn't move very
13 far into the soil profile, it can't be a
14 groundwater contaminant.

15 Turning now to what the Pollution Control
16 Board has considered earlier in this matter, the
17 Board has previously considered the issue of
18 whether the application of fertilizers containing
19 phosphorus should be limited in R71-15. Based on
20 the testimony in that proceeding, the Board voted
21 not to regulate phosphorus fertilizers. The
22 principle reason the Board did not choose to
23 regulate phosphorus was the lack of evidence that
24 phosphorus applied as fertilizer was a contaminant

1 in surface waters.

2 Again, for reasons of brevity, I am not
3 going to read the quotes from the Board order
4 written by Dr. Sam Eldridge (spelled phonetically),
5 but would recommend to the Board reading not only
6 this opinion but also other opinions written by
7 Board Member Diemal (spelled phonetically) and
8 others.

9 Another reason not to regulate phosphorus
10 is that the science surrounding how phosphorus
11 interacts in the soil matrix and how it becomes
12 available to plants is not well understood. If
13 agronomists could agree on how much total and
14 available phosphorus is needed with certainty, the
15 risk of limiting application by regulation would
16 not be so great.

17 University of Illinois agronomists have
18 provided guidance on how much phosphorus pentoxide
19 is required to increase soluble phosphorus in the
20 soil to desirable levels based on soil type.
21 However, recent developments in deep fertilizer
22 placement and fine tuning fertilization programs
23 using acre by acre soil data and global positioning
24 satellite technology, makes the application of all

1 fertilizers much more precise and complex than in
2 the past.

3 The following quotation prepared by a
4 University of Illinois agronomist (Mainz et al.,
5 93) illustrates the lack of understanding of how
6 phosphorus interacts in the corn and soybean field
7 environment.

8 Quoting, "phosphorus and potassium soil
9 test levels at the Northwest (Monmouth) and Orr
10 (Perry) Agricultural Research Centers have not
11 always increased or decreased at predicted levels.
12 Nor have the various crops grown on these soils
13 always produced yields in response to the existing
14 soil fertility levels or added fertilizer.

15 In 1990 the highest wheat yields at Perry
16 in the phosphorus rate study occurred in the plots
17 with the lowest P1 test. And the lowest yields
18 occurred in the most fertile plots. The following
19 two years the results were reversed. Similar
20 patterns have been observed in both corn and
21 soybeans at both locations.

22 Weather or more specifically, rainfall
23 patterns, will influence crop yields to the extent
24 that soil fertility levels and fertilizer

1 applications may be detrimental. It is impossible
2 to predict crop yield responses in relationship to
3 fertilizer applications and soil fertility.

4 Soil test changes in response to crop
5 removal and fertilizer have varied with soil
6 moisture and temperature at sampling time. The
7 year-to-year variability make it difficult to
8 monitor exact changes with any certainty."

9 Now moving to the issue of the existing
10 560 criteria, a suitable enforceable instrument
11 during this interim period of time before something
12 takes its place. One of the criticisms has been
13 that this document, Part 560, is not enforceable.

14 I disagree, in part, with this
15 assertion. While Part 560 uses words like
16 guideline and should in places, it was promulgated
17 by an enforceable rule, 35 Administrative Code
18 501.405. It is this rule that is enforceable. The
19 IEPA has brought past enforcement actions for
20 violations of this rule. However, in order to make
21 Part 560 more enforceable, Subpart C of Part 506
22 should reference Part 560 as the applicable
23 redesign criteria and clearly Subpart C is
24 enforceable.

1 I will now summarize. I have made the
2 following request for changes and/or take the
3 following position in this testimony:

4 Part 560 in the Livestock Facilities
5 Management Act should continue to be used as a
6 design criteria against which waste management
7 plans are prepared, reviewed and enforced until
8 properly amended, because it is an available and
9 effective criteria that is understood and time
10 tested.

11 The concept of being required to develop
12 a waste management plan is supported by the
13 livestock industry as an improvement to Part 560.

14 The Department should be given time to
15 assimilate the best science on the issues of
16 nitrogen availability, crop nitrogen requirements,
17 nitrogen credits, and organic nitrogen degradation.
18 It is asking too much of the Department to expect
19 fine tuning of the issues in this proceeding and
20 yet -- and this is very important to the livestock
21 industry -- these issues and others relating to the
22 contents of the Livestock Waste Management Plan
23 need to be fully evaluated in an official
24 rulemaking proceeding before the Illinois Pollution

1 Control Board.

2 Manure application rates should continue
3 to be controlled by the nitrogen agronomic rate,
4 not the phosphorus rate, because phosphorus is not
5 a water pollutant if erosion is controlled and
6 setbacks are adhered to. Additionally, phosphorus
7 interactions in an agronomic setting are not well
8 understood and, therefore, it is imprudent to
9 regulate them for non-environmental reasons. If
10 regulations are imposed it could limit future crop
11 yield and will certainly increase the cost of
12 manure spreading activities.

13 At this time I would like to enter into
14 the record my prepared testimony for the purpose of
15 the tables that I previously referenced.

16 I would like to thank you for the
17 opportunity to testify at this hearing, and I will
18 be happy to address questions at this time.

19 HEARING OFFICER LOZUK-LAWLESS: Thank
20 you, Mr. Frank.

21 Yes, Mr. Harrington.

22 MR. HARRINGTON: Mr. Frank, you are
23 recommending on behalf of your clients the attached
24 amendments that are found in Appendix A to your

1 testimony; is that correct?

2 MR. JIM FRANK: That is correct. The
3 Appendix A represents the livestock industry's
4 proposed changes to these perspective sections and
5 are provided to give our clear intent as to what
6 changes we would like to see.

7 MR. HARRINGTON: That is supplemented by
8 the changes to Section 506.303 that we earlier
9 passed out; is that correct?

10 MR. JIM FRANK: That is correct.

11 MR. HARRINGTON: I would ask that the
12 testimony be admitted, with the attachments, be
13 admitted as an exhibit as well as the Section
14 506.303 amendments that I passed out during the
15 testimony.

16 HEARING OFFICER LOZUK-LAWLESS: All
17 right. Thank you, Mr. Harrington.

18 The Board will admit as Exhibit Number 45
19 the testimony by Mr. Jim Frank with two corrections
20 that I have made on page 7 of 15, changing that
21 Part 560 of Subpart C to 506, which you discussed,
22 as well as the change on page 8 of 15 from absorb
23 to adsorb. Is that correct?

24 MR. JIM FRANK: That is correct.

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you. And the Section 506.303 waste management plan
3 contents will be admitted as Exhibit Number 46 into
4 the record.

5 (Whereupon documents were duly
6 marked for purposes of
7 identification as Exhibits 45
8 and 46 as of this date.)

9 HEARING OFFICER LOZUK-LAWLESS: I would
10 just like to ask Mr. Frank, would you be available
11 in Champaign for questioning, as well, because in
12 light of the fact that this was not prefiled and I
13 know that there are some people from the Department
14 of Agriculture that are no longer here today which
15 may have questions for you.

16 MR. JIM FRANK: Madam Hearing Officer, I
17 am sorry I cannot be at Champaign. If I didn't
18 have a previous engagement I would be.

19 However, I would like to point out that
20 this testimony was provided to Mr. Boruff, Mr.
21 Goetsch, and Mr. Frank last week at the conclusion
22 of the hearing in -- wait. This week -- it has
23 been a long week -- in DeKalb. As well as copies,
24 advance copies had been provided to the IEPA.

1 HEARING OFFICER LOZUK-LAWLESS: Okay.

2 Thank you.

3 MR. JIM FRANK: It was not prefiled, but
4 they have had advance knowledge.

5 HEARING OFFICER LOZUK-LAWLESS: All
6 right. Thank you.

7 CHAIRMAN MANNING: All four agencies have
8 had it or just those you have mentioned?

9 MR. JIM FRANK: I did not give a copy --
10 those are the two that I personally gave copies to.

11 HEARING OFFICER LOZUK-LAWLESS: All
12 right. Dr. Flemal.

13 PRESIDING BOARD MEMBER FLEMAL: Thank
14 you, Mr. Frank. I appreciate the testimony.

15 In reference to your discussions
16 regarding Part 506, at one point you make the
17 statement that Part 506 was adopted by the Board
18 over 20 years ago. One might interpret that
19 statement to be that the Board adopted these
20 regulations 20 years ago, but that would be an
21 incorrect assumption, would it not?

22 MR. JIM FRANK: Yes. What I meant to say
23 was that the Livestock Waste Management Regulations
24 were adopted by the Board 20 years ago. The

1 specific rule that I referenced that flows from 506
2 was later adopted, as I understand it, as agency
3 criteria, design criteria.

4 MR. TABER: 560.

5 PRESIDING BOARD MEMBER FLEMAL: I think
6 we mixed up 506 and 560 again.

7 MR. JIM FRANK: I am sorry. Could you
8 repeat your question?

9 PRESIDING BOARD MEMBER FLEMAL: 560 is an
10 agency rule, is it not?

11 MR. JIM FRANK: Yes, it is.

12 PRESIDING BOARD MEMBER FLEMAL: That is
13 the fundamental thing that I thought we ought to
14 bring up.

15 You propose, as part of your package that
16 506 be addressed at some future time and, in fact,
17 have specifically recommended that IDOA propose
18 specific revisions to Part 506 through a separate
19 Board proceeding. Because 506 is an agency rule,
20 you have -- now I did it. Excuse me. Since 560 is
21 an agency rule, could you share with us your
22 thoughts on how you see the three agencies
23 interacting on this?

24 MR. JIM FRANK: Yes, I could. I think,

1 in my actual testimony I changed a bit of what I
2 said there.

3 CHAIRMAN MANNING: You did.

4 MR. JIM FRANK: But I think there are
5 several options that are available to throw out the
6 old and bring in the new. That is really what we
7 are about here. I don't think the industry feels
8 that we should operate under the existing -- I am
9 going to call them the design criteria -- so I
10 don't have to trip over my 506, 560 tongue. I
11 think we acknowledge that there are some need for
12 changes therein and if a new rulemaking can proceed
13 in a reasonably expeditious time and say over the
14 next, say, year and a half something takes its
15 place, we think that's suitable.

16 How that could be done would be the
17 Illinois Department of Agriculture propose in a
18 separate proceeding to the Illinois Pollution
19 Control Board a new set of design criteria that
20 would govern the Livestock Waste Management Plan
21 and as a part of that proceeding perhaps IEPA could
22 withdraw their design criteria or kind of make it
23 go away, however they would choose to do that, as
24 the new came in.

1 PRESIDING BOARD MEMBER FLEMAL: Under
2 that option presumably the end result would be a
3 new part that would be in the Board's portion of
4 the regulations but would have the substance of
5 what is now in 560?

6 MR. JIM FRANK: Yes, that is correct.

7 PRESIDING BOARD MEMBER FLEMAL: Is that
8 the only option that you are suggesting as to how
9 to --

10 MR. JIM FRANK: I believe that is the
11 preferred option.

12 HEARING OFFICER LOZUK-LAWLESS: Dr.
13 Girard.

14 BOARD MEMBER GIRARD: Mr. Frank, I have a
15 question. At Section 506.303 (u) of the proposed
16 regulations, there is a provision that a manager of
17 a livestock facility should consider taking soil
18 samples to look at zinc and copper in fields that
19 have had manure applied.

20 Do you have any experience with studies
21 on the zinc and copper loading rates from manure
22 application?

23 MR. JIM FRANK: Yes, I have some
24 knowledge on that topic.

1 BOARD MEMBER GIRARD: Could you provide
2 us with a list of studies or maybe a summary or
3 what is your knowledge of that?

4 MR. JIM FRANK: What I would prefer to do
5 is summarize for you. I was present in Galesburg
6 when I believe certain testimony suggested that it
7 was very important to have copper and zinc analyzed
8 and perhaps even some control over it. You note
9 that the industry did not present testimony saying
10 that zinc and copper shouldn't be analyzed. We had
11 to go through this set of regulations and decide
12 what was very important to us and what maybe we
13 didn't totally agree with, but wasn't important
14 enough to bother the Board with asking for a
15 change. I think this falls into that latter
16 category.

17 Zinc and copper, in my view, and I think
18 the literature supports this, when applied through
19 livestock waste, do not present a threat of reduced
20 crop yields for crops grown in Illinois with the
21 climate we have and the soils we have. And they
22 don't present a water pollution problem, because
23 they are adsorbed just as strong as phosphorus is.

24 If you control soil erosion you are not

1 going to have a zinc and copper soil surface runoff
2 problem. It is reported in the agronomic
3 literature that zinc can be a biotoxic heavy
4 metal. That is true under certain extreme
5 conditions. But those, in my view, would never
6 happen through the application of livestock waste
7 at the nitrogen agronomic rate.

8 I work on a site in Illinois that has
9 nothing to do with livestock waste, but it has to
10 do with copper and zinc as water pollutants,
11 surface water pollutants. We have percentage, low
12 percentage zinc in the surface soil, and we can
13 successfully vegetate and grow, not field crops,
14 because that is not our intent, but grass crops,
15 which are nearly as susceptible as corn would be.
16 So the notion that you can put on enough zinc and
17 copper to ruin the soil or reduce crop yields, I
18 believe is an ill conceived notion not supported by
19 the scientific literature, in terms of agronomy.

20 BOARD MEMBER GIRARD: Is it possible for
21 you to supply to us a list of references to support
22 your statements?

23 MR. JIM FRANK: Yes. I will attempt to
24 do that prior to the closing of the record on the

1 14th of February.

2 BOARD MEMBER GIRARD: Thank you. We have
3 had testimony that rather than testing every year
4 for zinc and copper it might be better to test
5 every five years or at the most every three years.
6 So it sounds as if -- does your testimony support
7 the three years or the five years or the one year
8 testing for zinc and copper?

9 MR. JIM FRANK: It is not necessary to
10 test at all from an agronomic standpoint, a
11 groundwater or surface water standpoint, in my
12 opinion. As I said, we had to set some priorities
13 on what we wanted to ask for changes on, and this
14 wasn't -- this is not a big cost issue. But I
15 really think it is dated and it is not needed in
16 the Livestock Waste Management Plan.

17 BOARD MEMBER GIRARD: Thank you.

18 HEARING OFFICER LOZUK-LAWLESS: Thank
19 you. Mr. --

20 CHAIRMAN MANNING: If I might bring us
21 back to the Part 506, Part 560 debate for just a
22 second, it is your understanding, isn't it, Mr.
23 Frank, that Part 560, the agency rule, remains
24 currently effective regardless of what we are doing

1 in this proceeding, and it is an alive and well
2 rule, and it is applicable in this state regardless
3 of what we do or don't do in 506?

4 MR. JIM FRANK: That is my understanding.
5 I believe that is borne out by its inclusion in the
6 Livestock Management Facilities Act.

7 CHAIRMAN MANNING: Okay. Thank you.

8 HEARING OFFICER LOZUK-LAWLESS: Mr.
9 Frank, to get to your suggestions relating to Part
10 506.305 (b), your suggested language takes out the
11 60 working days prior to the application of the
12 waste. I have a two-part question. First, you had
13 suggested that the waste be sampled and analyzed at
14 the same time as the application is occurring.

15 We don't have any testimony on the record
16 that any farms are currently doing that. To your
17 knowledge, is that a reasonable way to test? Do
18 you know of any --

19 MR. JIM FRANK: I am thinking first
20 whether we did have some testimony. I thought
21 someone, some producer did testify that they
22 sampled their manure at the time that it was
23 agitated, and then they knifed it in. I thought
24 that but --

1 MR. LEGG: I believe I stated that
2 earlier.

3 HEARING OFFICER LOZUK-LAWLESS: Oh, all
4 right. Okay. Thank you.

5 MR. LEGG: It was pretty scientific. I
6 put mine on with an irrigation gun, and I take five
7 gallon buckets and it collects the amount of water
8 that the effluent that is being applied, and I take
9 a composite sample of all of them and send them in
10 to be analyzed, and by the inches that the water is
11 applied per acre and translate that to gallons, and
12 extrapolate that to nutrients per acre.

13 HEARING OFFICER LOZUK-LAWLESS: Okay.
14 Thank you. I think I was thinking of Mrs.
15 Maschoff's testimony, and they had a fairly
16 advanced system of --

17 MR. LEGG: Speaking of that, the testing
18 is not done right then. The sampling is done.

19 HEARING OFFICER LOZUK-LAWLESS: Okay.

20 MR. LEGG: I don't pay the turnaround
21 fee. It takes approximately two weeks to get the
22 test back.

23 HEARING OFFICER LOZUK-LAWLESS: Okay.

24 MR. JIM FRANK: I would like to comment,

1 though, on why, I guess, this is important. I
2 think there could be a bias if one goes out and
3 attempts to sample a manure pit or a lagoon, and
4 the bias would be to the detriment of the
5 environment. The material that is contained on top
6 of either an anaerobic lagoon or a pit is going to
7 have less nutrients than the material at the bottom
8 as an add mixture.

9 If you have ever tried to sample from
10 either a pit or a lagoon, which I have, it is not
11 an easy task to get a composite sample with depth,
12 especially in a 9 foot pit or a 20 foot deep
13 lagoon. I am not exactly sure what Mrs. Maschoff's
14 hired person that goes out is set up to do in all
15 of their lagoons. I am not questioning that that
16 person is not getting a representative sample, but
17 perhaps due to their size and their specialization
18 and the fact that they are hiring that service out
19 they are comfortable with that.

20 But I think most producers are not in
21 that position. They would be faced with either
22 going out there with some kind of a rod or a sludge
23 sampler or a bucket or firing up the pump and
24 agitating it. I believe that it is just a much

1 more representative sample that is going to protect
2 the environment better because we are going to show
3 higher numbers, higher nitrogen, if we do it when
4 it is being applied.

5 You would do that right out of the back
6 of the injector, right out of the back of that
7 injection rig, or by putting a bucket down and
8 letting the irrigation system run over it and
9 taking those and sending them off.

10 HEARING OFFICER LOZUK-LAWLESS: Then why,
11 when you omitted the 60 days, did you not include
12 that it should be sampled at the time of the
13 application, because you could read this to sample
14 and analyze at a longer time frame than 60 days, by
15 simply omitting that language and not adding any
16 language that said at the time of application.

17 MR. JIM FRANK: Well, I attempted to give
18 that intent by what was added where it says a
19 sample taken during a waste application the
20 previous year can be used as a representative
21 sample as the waste to be applied the following
22 year, unless there has been a significant change in
23 the waste management practices.

24 So here is the way I would see this

1 going. Someone has an obligation to do a waste
2 management plan. The first year they use the
3 look-up tables, prepare their plan and submit it,
4 or if they are in a position to collect a sample of
5 waste, as applied, they do that and use that in
6 their plan.

7 HEARING OFFICER LOZUK-LAWLESS: Okay.

8 MR. JIM FRANK: Then in subsequent years
9 you use the previous year result for the next
10 year's calculation. Unless, of course, you change
11 your waste management plan so it would no longer be
12 representative.

13 HEARING OFFICER LOZUK-LAWLESS: Okay.

14 Thank you. Mr. Feinen.

15 MR. FEINEN: Just to explain this Table
16 1, it seems to me using numbers from NPDES setup
17 here, the definition of NPDES animal units, did you
18 know if the Agency's table that is being used here
19 was based off of facilities that had NPDES permits
20 or all facilities?

21 MR. JIM FRANK: Mr. Taylor advised me
22 that subsequent to sending me this table that he
23 has removed the designation of NPDES animal units.
24 I am going to, if I might, just ask Mr. Taylor to

1 describe what is meant.

2 The way I took it, just so you know how I
3 interpreted it, was that this was of the 155
4 facilities that the agency cited, and had really
5 nothing to do with whether that facility had an
6 NPDES permit or not, since almost none do. It did
7 use the NPDES units in calculating the sizes.

8 If Mr. Taylor would like to -- am I
9 accurate?

10 MR. A.G. TAYLOR: Basically that's it.
11 We have been working with this to make it
12 presentable, and the discussion was that by having
13 NPDES up there it would make it confusing when
14 people think it was related to facilities under an
15 NPDES permit. It doesn't -- we just dropped the
16 NPDES and left animal units up there to give you an
17 idea of the relative size of the facility in
18 relation to the type of problems we have
19 encountered.

20 MR. JIM FRANK: The industry appreciates
21 Mr. Taylor's coming forward with this table and
22 other information, that I guess the Board is going
23 to get in the final proceeding, so that we could
24 present our testimony.

1 HEARING OFFICER LOZUK-LAWLESS: Thank
2 you. Okay. Ms. Poulos.

3 MS. POULOS: I have a question about the
4 same table. There is source type of tile
5 mentioned. Are those instances related to known
6 tiles or do you know if there are any related to
7 hidden tiles?

8 MR. JIM FRANK: I am going to, if I
9 might, defer to Mr. Taylor on that. This is his
10 table. I used it for the limited purpose of
11 grabbing this 155 number.

12 HEARING OFFICER LOZUK-LAWLESS: Okay.
13 Mr. Taylor, would you like to answer that
14 question?

15 MR. A.G. TAYLOR: I can clarify that now,
16 but if I do, ultimately --

17 MR. WARRINGTON: We are going to have
18 more questions. We do have testimony prepared on
19 the whole issue of the historical compliance rates
20 and what the problems have been. So we could
21 perhaps answer the limited question right now and
22 then --

23 HEARING OFFICER LOZUK-LAWLESS: That's
24 fine.

1 MR. WARRINGTON: -- maybe defer the rest
2 until another time, like Champaign.

3 HEARING OFFICER LOZUK-LAWLESS: That's
4 fine.

5 MR. A.G. TAYLOR: The tile connections on
6 there relate to incidents where there was a field
7 application and the manure inadvertently got into
8 tile, that is one instance, and discharged to a
9 receiving stream or related to water pollution
10 problems there have been other incidents where
11 people have directly disposed of waste into tiles.

12 And we have also had situations where we
13 have had overflows from pits or lagoons that got
14 into tile systems and ultimately discharged into
15 receiving waters. We don't discern how many of
16 those each subcategories have occurred. We just
17 have how many incidents were -- how many problems
18 have we seen with field tile connections.

19 HEARING OFFICER LOZUK-LAWLESS: Thank
20 you, Mr. Taylor.

21 Are there any questions in the audience?
22 Yes, Mr. Frank.

23 MR. SCOTT FRANK: My name is Scott
24 Frank.

1 In your testimony you mentioned applying
2 manure within the agronomic nitrogen rate. What is
3 your definition of the agronomic nitrogen rate?

4 MR. JIM FRANK: It is the amount of
5 nitrogen that one could expect would be taken up by
6 a given cropping pattern. I believe there is a
7 definition in the design criteria which I subscribe
8 to. I think that's the intent. You target a crop,
9 you know what your intended yield is going to be,
10 you find out how much nitrogen you are applying and
11 that amount of nitrogen should be taken up more or
12 less in the year.

13 MR. SCOTT FRANK: So you mentioned it is
14 to be based on yield?

15 MR. JIM FRANK: That is correct.

16 MR. SCOTT FRANK: How will that yield be
17 determined?

18 MR. JIM FRANK: Well, I believe in the
19 period of time that I am referring to here is a --
20 I suggested a year and a half before these
21 regulations were rewritten, that the entity
22 preparing a waste management plan should be
23 required to submit some clear, cogent, convincing
24 evidence of how they arrived at either historic

1 yield, if that is what they choose to use, or
2 intended future yields based on certain agronomic
3 principles that they intend to apply. So it is
4 clearly our intention to have yields documented.

5 The difficulty we had with the three
6 reference sources by the Department is that they
7 can be static, they can be inaccurate as to that
8 specific field where the farmer intends to apply a
9 higher manure rate or higher fertilization rates.
10 So I think that there could be a number of ways to
11 document and substantiate yields.

12 MR. SCOTT FRANK: But you did say it was
13 to be based on past yields?

14 MR. JIM FRANK: Past yields should be a
15 factor that could be used. For example, in the
16 Maschoff operation, they have been putting manure
17 on given fields for years and years and years and
18 irrigated, so one would not expect a major increase
19 in yield from one year to the next.

20 But take someone who has never had
21 irrigation, never put livestock waste on, and is
22 going to put it on a poor piece of ground that has
23 gotten currently improper fertilization; you would
24 expect a major yield increase in the first year. I

1 believe that the producer should be allowed to make
2 that argument to the Department, and the Department
3 consider it, and if it is based on reasonable
4 agronomic principles and scientific literature, the
5 Department should accept that.

6 MR. SCOTT FRANK: A lot of these plans
7 for producers of 1,000 and 7,000 animal units, in
8 fact, I should say all of them from 1,000 to 7,000
9 will not be filed with the Department. It will be
10 kept on the facility. Some of these, we may never
11 see that information. In your suggested changes
12 here you mention a change from optimum crop yields
13 to targeted crop yield goal. What would there be
14 to prevent a producer from stating that his yield
15 goal is 300 bushels to the acre, when in reality he
16 may never have produced more than 200 bushel?

17 MR. JIM FRANK: I think that's a very
18 valid question. That goes to the basic issue of
19 what is the Department's philosophy going to be
20 regarding the use of these plans to assure proper
21 manure management procedures, and how trusting
22 should the government be for self-generated plans
23 that might -- that you might only see or enforce
24 against a small percentage of them. That is

1 usually the dilemma of government when asking for
2 any kind of self-certification procedure.

3 Let's take your example, Scott, where
4 somebody is lying about what the yield might
5 possibly be. You know, they are not the Illinois
6 corn growing champion at 350 bushels an acre, but
7 yet they claim that they can do that in order to
8 get their acreage within the plan to come out to
9 the proper calculation.

10 If your inspector goes to that farm and
11 sees that they are using an outlandish number of
12 that type, I would presume he would ask them to
13 substantiate in the plan their calculations and
14 their basis. And if you would disagree with that
15 then perhaps there should be a mechanism for you to
16 enforce against a false claim.

17 I don't see -- I mean, if we are getting
18 down to the basic integrity of the person preparing
19 the plan, you can pencil whip all the different
20 parts of this plan, and I think you pointed out one
21 area where that could occur. But I think on the
22 reverse side of that, with the vast majority of the
23 producers viewing this as a resource, they are
24 going to use it to maximize their profit

1 potential. And generally that will be the true
2 nitrogen agronomic rate as best that they can
3 determine it.

4 MR. SCOTT FRANK: If there is no
5 definition for crop yield goal, I don't know if the
6 Department would have any basis in which to
7 challenge their goal that they state. Do you have
8 any comment on that?

9 MR. JIM FRANK: I think the Department
10 could have a basis for a challenge in that, based
11 on the response that they give to your question.
12 If you say show me how it is you are going to grow
13 300 bushels here and they are unable to do that
14 based on the Illinois Agronomy Handbook, the soil
15 type, the past historic yield literature,
16 demonstrating it when you apply certain amounts of
17 nutrients, input moisture, you get a big increase
18 in yield, if they can't meet that burden, then I
19 think you have got them -- you have got them with a
20 plan that would not be approvable. I think you
21 have the ability here to ask them to rewrite that
22 plan.

23 MR. SCOTT FRANK: Okay. Also a change
24 that you suggested deals with adjustment to

1 nitrogen availability due to the conversion of
2 organic nitrogen to a plant available form.

3 MR. JIM FRANK: Yes.

4 MR. SCOTT FRANK: You suggested taking
5 out the language whereby the Department may adopt
6 criteria for this. In Part 560, the current
7 regulations, the only reference to the conversion
8 of organic nitrogen to a plant available form that
9 I found is in the general statement, and it
10 presumes application is -- yearly application is
11 over a period of time in which an equilibrium is
12 reached.

13 Going by the change that you suggested
14 here, what data or what information would be used
15 in a plan for a facility that, say, is just
16 starting up or is applying manure on the land for
17 the first time to account for adjustment of
18 nitrogen availability due to conversion of organic
19 nitrogen to a plant available form?

20 MR. JIM FRANK: 560.201 (e), the way I
21 interpret that has been used, is that you use --
22 you can use a five year nitrogen regeneration cycle
23 and actually in the sludge criteria there is -- it
24 shows a specific formula. I think there is a

1 calculation to show, though, that five years works
2 out. It is that concept that I believe should be
3 utilized until such time as the Department
4 establishes that something else is better.

5 I think this five years is within the
6 normal range of the Midwest Plan Service document
7 as well. And I am -- the difference, Scott,
8 between the Department's proposal for four years
9 and me saying just keep status quo at five is it
10 probably in most cases is very small. I think as
11 one previous witness said it is measured with a
12 micrometer and then we chop it off with an axe.
13 That's what we are talking about here.

14 It is not so much I believe five years is
15 better than four. I believe that the existing
16 design criteria contained in 560 has great value to
17 get the plans into the Department that are due very
18 soon without putting an undue burden on you to
19 promulgate rules very soon. That's all we are
20 really trying to accomplish here, I think, is
21 stability.

22 HEARING OFFICER LOZUK-LAWLESS: Mr.
23 Taylor, do you have a follow-up?

24 MR. A.G. TAYLOR: Yes, I do. In regard

1 to the last topic that Mr. Frank brought up for Mr.
2 Frank, if the Department carried out the
3 percentages by two more factors, what I am saying
4 is if they have 50 percent the first year, 25
5 percent the second, 12 and a half the third, if
6 they carried that out in the same order two more
7 times to, what, 6.25, and then 3-something after
8 that, would not that reflect the provision that is
9 currently in 560 and would not that satisfy or
10 accommodate your concern?

11 MR. JIM FRANK: As to the math, you are
12 exactly right, Mr. Taylor. It is one and the
13 same. So if that was in the Department's proposed
14 rule, as to that specific issue, agronomic nitrogen
15 rate, degradation on mineralization rates, they
16 would become one and the same thing. But it is not
17 one and the same necessarily in terms of an
18 uncertain rule or criteria.

19 I am concerned not only about the science
20 of the number, because I really think probably the
21 Department of Agriculture, in other resources they
22 can draw upon, are very qualified to get at the
23 science of the number. I am concerned about the
24 delay in establishing all of these criteria I

1 referenced, and that delay creating uncertainty in
2 the livestock industry as to how these plans are to
3 be developed.

4 MR. A.G. TAYLOR: If they adopted that
5 language or if this language were to be adopted in
6 this proceeding, then there would be no question as
7 to what it is.

8 MR. JIM FRANK: On that specific point,
9 that is correct.

10 HEARING OFFICER LOZUK-LAWLESS: Mr.
11 Frank, do you have any follow-up questions?

12 MR. SCOTT FRANK: Yes. In regards to the
13 three years versus the five years, or four years
14 versus five years, in the Department's proposed
15 rule, it lists the factors of 50 percent, 25
16 percent, and 12 and a half percent for mineralized
17 organic nitrogen based upon the first year of
18 mineralized nitrogen. So, in effect, it is a four
19 year cycle. The first year as proposed, as was
20 presented in the testimony, to be based upon a
21 table of values for mineralized organic nitrogen
22 that appears in the Midwest Plan Service document.
23 As I said, that would be the first year.

24 Subsequent years then would be 50 percent

1 of that first year value, and then 12 and a half --
2 excuse me -- 25 percent of that first year value
3 and then 12 and a half percent of that first year
4 value which, in essence, makes it a four year
5 cycle.

6 What Mr. Frank was referring to was a
7 five year cycle, as in Part 391, and when you get
8 down to that fifth year, in which, as Mr. Taylor
9 pointed out, would be 6 and a quarter percent, you
10 are dealing with 6 and a quarter percent of a
11 number that you started with. And in most cases
12 that additional amount of nitrogen is going to be
13 very small, maybe in the range of a few pounds per
14 acre, if that much. So the difference between the
15 four year cycle and the five year cycle is very
16 minimal.

17 HEARING OFFICER LOZUK-LAWLESS: Thank
18 you, Mr. Frank.

19 Mr. Warrington.

20 MR. WARRINGTON: Mr. Frank, I believe you
21 testified that the livestock operator needs some
22 sort of immediate guidance for preparing their
23 waste management plans even if they don't have to
24 submit them to the Department of Agriculture for

1 review.

2 For guidance purposes, why wouldn't the
3 emergency rules that have been adopted by the Board
4 suffice?

5 MR. JIM FRANK: The emergency rules are
6 instructed to the extent that they cover the things
7 that an operator needs to know to complete a plan,
8 they do suffice. We also have the Livestock
9 Management Facilities Act, which provides statutory
10 guidance, and that should be used. But I believe
11 if you put those two statutes side by side -- I am
12 sorry -- the emergency rule and the Livestock
13 Management Facilities Act side by side it doesn't
14 answer all the questions. That's why you need 560
15 in the interim until something more comprehensive
16 is developed.

17 MR. WARRINGTON: Did you really mean to
18 testify that Part 391 was a Board rule?

19 MR. JIM FRANK: No, I believe it is an
20 agency criteria, similar to 560.

21 MR. WARRINGTON: Okay.

22 MR. JIM FRANK: Okay. Thank you for that
23 correction.

24 HEARING OFFICER LOZUK-LAWLESS: Mr.

1 Warrington, I think we have a follow-up on your
2 previous question.

3 Go ahead, Mr. Frank.

4 MR. SCOTT FRANK: Getting back to this
5 timing issue, the emergency rule was adopted on
6 October 31st of 1996. In that rule, a section
7 states that producers have six months from the date
8 of the effective -- from the effective date of the
9 rule in which to prepare a plan. That date then
10 would be April 30th of this year. As I said, that
11 is based on the emergency rules.

12 This final rule, according to the table
13 put out with the Board order, states that this
14 final rule or this permanent rule is to be in place
15 by mid to late May and the statute says a six month
16 period from the date of adoption of the Act, so
17 that puts it at May 21st, 1997. So according to
18 the emergency rule producers are to have a plan in
19 place prior to the adoption of this permanent
20 rule.

21 If the final rule has the same language
22 dealing with the six months and that is in the Act,
23 then a possibility would be that when the final
24 rule is adopted, producers may have another six

1 months in which to prepare a waste management
2 plan. However, producers would have had to have
3 already prepared a plan under the emergency rule.

4 So there comes a question as to who might
5 be affected by this. It may only be a handful of
6 producers that begin operation or expand exceeding
7 1,000 animal units. So there may be a little bit
8 of a lag period in here in which very, very few
9 producers might be affected by the waste management
10 plan provisions of the permanent rule.

11 HEARING OFFICER LOZUK-LAWLESS: Thank
12 you, Mr. Frank.

13 MR. JIM FRANK: I know that wasn't a
14 question, Scott, but what is the point you are
15 making? Because I am not sure I agree that only a
16 few are affected. If you have got people that have
17 over 1,000 animal units that have to prepare a
18 plan, it is important that the government provide
19 them the information with which to prepare the
20 plan. We shouldn't only focus on dates when plans
21 must be finalized and available, like the April
22 30th, because producers have to make decisions
23 about land, crop rotations, working out things with
24 neighbors to apply to more land, buying land, and I

1 can go on and on and on with all the considerations
2 that a producer has to look at to develop a proper
3 waste management plan. And they are doing that
4 right now, or they should be, if they are focusing
5 on an April 30th, 1997 date. That's the critical
6 time frame I am talking about here.

7 HEARING OFFICER LOZUK-LAWLESS: Yes, Mr.
8 Frank.

9 MR. SCOTT FRANK: I guess my point here
10 was that you talked about producers needing
11 information now. Well, they have the information
12 now based on what is in the emergency rule, and
13 that a great majority of producers, according to
14 the dates in the emergency rule, are going to have
15 to have a waste management plan prepared before
16 these permanent rules go into effect.

17 So there may be some time then in which
18 to flesh out some of these details and some of
19 these figures before that next six month period
20 expires, as is stated in the Act. There may be
21 kind of a grace period in there in which some of
22 these details could be worked out.

23 HEARING OFFICER LOZUK-LAWLESS: Thank
24 you.

1 Okay. Mr. Warrington, do you want to
2 continue?

3 MR. WARRINGTON: Yes. Mr. Frank, you
4 talked about the enforceability of the Part 560
5 rules, and I think you stated that the Illinois EPA
6 has brought cases alleging violations of Part 560.

7 Could you identify any particular cases
8 where that has happened?

9 MR. HARRINGTON: I believe, for the
10 record, he said there were cases pursuant to 104 to
11 enforce the 560 rule.

12 MR. JIM FRANK: Yes, that is what I said
13 and that deviates somewhat from my prepared
14 testimony, Mr. Warrington.

15 MR. WARRINGTON: Can you identify any
16 cases that alleged a violation of a Board rule?

17 MR. JIM FRANK: I don't have those at the
18 tip of my tongue. It has been since 1979 when I
19 was involved in some enforcement cases. But the
20 context that I recall, and I believe I have also
21 seen in compliance inquiry letters since and 31 (d)
22 letters since, is where the agency alleges
23 violation of 501.405. That's the allegation of
24 violation, and uses to substantiate that in

1 compliance inquiry letters a discussion that some
2 advisory or guideline number was violated such as
3 didn't honor the setback applied immediately
4 adjacent to stream or something of that nature. So
5 that is what I am speaking of.

6 But I don't want you to miss the larger
7 point, Mr. Warrington, and that is which I said if
8 the Department of Ag utilizes 560 over the next
9 year and a half as criteria under which to approve
10 plans and then the plan itself is violated, the
11 enforcement would come through the Illinois
12 Department of Agriculture's enforcement of their
13 own regulation -- I am sorry -- of the regulations
14 before the Board now.

15 MR. WARRINGTON: So you are making a
16 distinction between actually violating a particular
17 section, say, of Part 560 versus using one of the
18 sections of Part 560 as support for violation of a
19 Board regulation?

20 MR. JIM FRANK: That is correct.

21 MR. WARRINGTON: So that there is no
22 particular provision for penalties in the
23 Environmental Protection Act for violations of,
24 say, an agency rule like Part 560?

1 MR. JIM FRANK: I believe that's correct.

2 MR. WARRINGTON: I believe you have
3 proposed that the Board adopt as Board regulations
4 something equivalent to Part 560 as guidance for
5 the Department of Agriculture and for the regulated
6 community; is that correct?

7 MR. JIM FRANK: That is correct.

8 MR. WARRINGTON: Have you considered the
9 fact that if it does become a Board regulation, the
10 Illinois Environmental Protection Act establishes
11 penalties for violations of Board regulations in
12 the amount of \$10,000.00 to \$50,000.00 or
13 \$50,000.00 and more, I believe.

14 MR. JIM FRANK: Well, I think there is
15 various ways to structure a proposal to the Board,
16 if the Department would embrace that concept, that
17 could utilize the Department's enforcement
18 capabilities without necessarily subjecting people
19 to violations of the Environmental Protection Act.
20 That concludes my answer.

21 MR. WARRINGTON: I don't have any further
22 questions.

23 HEARING OFFICER LOZUK-LAWLESS: Thank
24 you, Mr. Warrington.

1 Are there any other questions of Mr.
2 Frank from anyone in the audience?

3 Seeing none, Mr. Feinen.

4 MR. FEINEN: Real quick. Going back to
5 the crop yield goals, the discussion had there, do
6 you think it would be appropriate in the waste
7 management plan to include the basis for coming up
8 with this targeted crop yield goal?

9 MR. JIM FRANK: Yes, I do.

10 MR. FEINEN: And this is just a stab in
11 the dark, in the case that you might be thinking
12 about. I think Meadow Lark Farms was the case
13 dealing with that type of area of violation of
14 enforcement action, just off the top of my head.

15 MR. JIM FRANK: That is correct. That
16 was a long time ago, but I was involved in that.
17 Thank you.

18 HEARING OFFICER LOZUK-LAWLESS: Are there
19 any other questions from the Board?

20 CHAIRMAN MANNING: I have a question.
21 Mr. Frank, you were talking earlier about the
22 agronomic nitrogen rate, and there was a question
23 as to what is the definition. In fact, you were
24 asked the definition. The definition is, we have

1 properly found out now, contained in Section
2 560.201 (a), the current 560 rules, and it
3 basically said it is defined as the annual
4 application rate of nitrogen that would be expected
5 to be required for reasonable anticipated crop
6 yield.

7 That particular section, however, goes on
8 and talks also about the phosphorus application
9 being perhaps at some times the appropriate to be
10 applied. And I am wondering if you think that that
11 particular provision is in any way inconsistent
12 with your testimony, and if you wanted to square
13 those two things, that would help me.

14 MR. JIM FRANK: Okay. Thank you for
15 asking the question.

16 I do not believe it is inconsistent. I
17 acknowledged in my testimony that if we are talking
18 about resource management only, which many farmers
19 have talked about on this topic, I acknowledge and
20 they practice application at the phosphorus rate.
21 If they choose to do that based on all their
22 considerations, I think that's great.

23 The question, I believe, before us is
24 should the Illinois Pollution Control Board

1 regulate at a resource management rate something
2 that is not causing pollution. And I maintain if
3 you control soil erosion, the phosphorus does not
4 cause surface water or groundwater pollution. So I
5 don't think there is an inconsistency.

6 You are the Illinois Pollution Control
7 Board, not the Illinois Resource Management Board.
8 And it is nice to do a lot of things. It would
9 have been nice if every state employee who came
10 here today had ridden in the same car or van. And
11 at one time some EPA decided to regulate car
12 pooling and the number of people in cars and all
13 kinds of things like that. But it was decided that
14 really wasn't needed for pollution control. I
15 think this is a good example of that.

16 It is a good thing to keep in mind. Many
17 farmers will use it, but the scientific data is not
18 there to justify the Board regulating phosphorus as
19 a water pollutant.

20 HEARING OFFICER LOZUK-LAWLESS: Dr.
21 Marlin.

22 MR. MARLIN: Based on your testimony you
23 indicated that you believe that there wouldn't be a
24 surface water or a groundwater pollutant. Could

1 phosphorus beyond a certain level, particularly
2 over a long time, like the agronomic books talk in
3 terms of 50 to 100 years, oftentimes, could
4 phosphorus become a land pollutant or a soil
5 pollutant?

6 MR. JIM FRANK: In terms of toxicity?

7 MR. MARLIN: To plants, yes, or adverse
8 effects long-term, over time.

9 MR. JIM FRANK: I believe that under
10 certain circumstances phosphorus can create a plant
11 toxicity in certain species under certain very
12 specific soil type setting and pH ranges. It is
13 not a common thing to happen, but I believe it can
14 happen. But, again, that's a resource management
15 issue. Are we going to get into telling a farmer
16 how to avoid that on his farm or should that be his
17 business, if it is not a water pollutant.

18 HEARING OFFICER LOZUK-LAWLESS: Thank
19 you, Mr. Frank.

20 Are there any other questions? Do you
21 have a question, Mr. Legg?

22 MR. LEGG: Yes. I would like a point of
23 clarification on the farm on the yield goals that
24 were unattainable, I assume.

1 MR. FEINEN: Well, in the Meadow Lark
2 Farms case that dealt with a violation -- an
3 enforcement action brought against Meadow Lark
4 Farms concerning water pollution from field
5 application or from lagoon runoff. I can't be
6 quite sure. But it was a response to Mr. Frank's
7 testimony about enforcing the 560, the 104, 501.140
8 regulations. It was not -- I was not bringing that
9 case up on my personal knowledge that someone
10 violated some application requirement. It was more
11 the fact that there was a violation of a waterway
12 in that case.

13 MR. LEGG: I would like to bring up a
14 point. Illinois had the honor -- I am at a loss of
15 whether this man is still alive or not. But Herman
16 Warsaw has raised over 300 bushel corn at least
17 twice. And on this field where he has done this,
18 have had manure applications for over 30 years on
19 it.

20 So to put somebody's goal to what some
21 bureaucrat determines the level that is attainable
22 is really suspect, because that has been done at
23 least twice here in Illinois. The last time it was
24 done in one of the farm magazines the main article

1 on that, was that the cost of production was so low
2 that if the United States could produce corn like
3 that the ultimate cost to the consumer would be
4 half of what it is now. Thank you.

5 HEARING OFFICER LOZUK-LAWLESS: Thank
6 you, Mr. Legg.

7 Mr. Frank.

8 MR. JIM FRANK: I would just like to
9 follow-up on that. I am well aware of what Mr.
10 Warsaw has done. But I think -- I don't want to
11 have my testimony interpreted to mean that we
12 should -- that a producer should be able to pick
13 out any pie in the sky number just because it is
14 the highest yield that has ever been grown and try
15 to sell that to the Department.

16 If I was in the Department and somebody
17 gave me a 300 bushel yield on a test plot, I
18 believe I would question it and ask them to
19 recalculate it. That should be the proper role of
20 the Department. And people shouldn't be doing
21 that.

22 If we are on Herman's farm and he is
23 putting manure on, then he should be able to take
24 credit for having actually done that, and that

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1 would be an historic yield. I think some common
2 sense has to come in here in terms of what people
3 can claim for future yields as they improve their
4 agronomic practices.

5 HEARING OFFICER LOZUK-LAWLESS: Thank
6 you, Mr. Frank.

7 Okay. Are there any other questions for
8 Mr. Frank?

9 Seeing none, thank you very much, Mr.
10 Frank.

11 CHAIRMAN MANNING: I might indicate that
12 just because we don't have any at this time doesn't
13 mean the Board won't reflect on the testimony. We
14 just received it this morning, so we may take some
15 time, and if we have to ask some questions later we
16 may do that in written form or --

17 MR. JIM FRANK: We can respond to that.

18 MR. HARRINGTON: If we can do that in
19 writing, because it is going to be impossible for
20 Mr. Frank to be in Champaign. Otherwise, we would
21 have presented him in Champaign.

22 CHAIRMAN MANNING: Okay.

23 HEARING OFFICER LOZUK-LAWLESS: Okay.

24 Thank you.

1 Is there anyone else present today that
2 did not sign up to testify, but would like to give
3 testimony this afternoon?

4 No? Okay. I would remind you that if
5 you would like to contribute anything in the form
6 of a public comment to send it to the Board. If
7 you need the address I have it up here, and just to
8 mark on the top of your document that it refers to
9 R97-15. We will be accepting those public comments
10 that are received at the Board's office until
11 February 14th.

12 Also, to remind you, if you are
13 interested, that this hearing will be continued to
14 Friday, February 7th, in Champaign, which is now
15 currently the last scheduled hearing in this
16 matter.

17 Chairman Manning, do you have any
18 comments?

19 CHAIRMAN MANNING: I thank you all for
20 your very steady attention. It has been a long
21 day. It has been a long week for us, actually.
22 For a lot of us it has been a long week. There is
23 people that have been traveling the circuit all
24 week. We appreciate all of that, and we appreciate

1 all of your attention today, and we thank you for
2 coming.

3 HEARING OFFICER LOZUK-LAWLESS: Any
4 comments, Dr. Flemal?

5 PRESIDING BOARD MEMBER FLEMAL: No.

6 HEARING OFFICER LOZUK-LAWLESS: Okay.
7 Then we will continue this matter until Friday,
8 February 7th. Thank you.

9 (Whereupon, the proceedings
10 were adjourned at approximately
11 5:15 p.m.)

12 (Exhibits 41 through 46 were
13 retained by Hearing Officer
14 Lozuk-Lawless.)

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1 STATE OF ILLINOIS)
2) SS
3 COUNTY OF MONTGOMERY)

4 C E R T I F I C A T E

5 I, DARLENE M. NIEMEYER, a Notary Public
6 in and for the County of Montgomery, State of
7 Illinois, DO HEREBY CERTIFY that the foregoing 309
8 pages comprise a true, complete and correct
9 transcript of the proceedings held on the 31st of
10 January A.D., 1997, at the Ramada Inn, 405 South
11 44th Street, Mt. Vernon, Illinois, in the matter of
12 Livestock Waste Regulations, 35 Illinois
13 Administrative Code 506, Docket R97-15, in
14 proceedings held before the Honorable Audrey
15 Lozuk-Lawless, Hearing Officer, and recorded in
16 machine shorthand by me.

17 IN WITNESS WHEREOF I have hereunto set my
18 hand and affixed my Notarial Seal this 4th day of
19 February A.D., 1997.

20 Notary Public and
21 Certified Shorthand Reporter and
22 Registered Professional Reporter
23 CSR License No. 084-003677
24 My Commission Expires: 03-02-99