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FOR THE UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT INSPECTION SERVICE
VETERINARY SERVICES

UNITED STATES DEPARTMENT OF AGRICULTURE - APHIS VETERINARY SERVICES

VIRAL HEMORRHAGIC SEPTICEMIA

(VHS) PUBLIC MEETING

at Peabody Memphis Hotel
149 Union Avenue
Memphis, Tennessee

NATIONAL ANIMAL HEALTH POLICY & PROGRAMS

TRANSCRIPT OF MINUTES OF THE MEETING

JANUARY 9, 2007

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00003

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
TRANSCRIPT OF PROCEEDINGS

The following is a transcript of the minutes of the USDA-APHIS Veterinary Services (VHS) Public Meeting, Jill B. Rolland presiding, which was held on this the 9th day of January 2007, at the Peabody Memphis Hotel, Venetian Room, 149 Union Street, Memphis, Tennessee.

* * * * *

MR. RENDAHL: Good morning.
UNIDENTIFIED SPEAKER: Good morning.

MR. RENDAHL: I would like to welcome everyone to the Peabody Hotel in Memphis for a public meeting to discuss Viral Hemorrhagic Septicemia, or VHS.

This is one of four sessions to be held around the country to allow interested parties an opportunity to comment on a national response plan for this disease. As you can see, we are in Memphis today. Lakewood is outside of Denver. And the sessions tomorrow are in Romulus, Michigan and Coraopolis, Pennsylvania.

The format today is, as you can see, we will begin the sessions with some opening remarks from the APHIS representatives and then provide comments from you folks.

I didn't introduce myself. My name is Dale Rendahl, and I work for the USDA Animal and Plant Health Inspection Service, or we may herein be referred to

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00004

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
as APHIS.

2 I will be moderating the session today
3 to ensure that everyone has the opportunity to comment. If
4 you want to speak, please make sure you have signed up in
5 the order that you want to speak on the sign-up sheets in
6 the back of the room. I will call on the speakers in the
7 order in which they have signed up in.

8 When all of you folks have had the
9 opportunity to comment, we will allow the APHIS
10 representatives to provide some closing comments and
11 remarks.

12 The meeting is scheduled to go until
13 12:00 noon. But judging by the number of people here, I
14 expect we will finish early, depending on the discussion and
15 the length of comments. We may take a break or we may not.

16 For your information, the restrooms are
17 located just outside the door, the steps up to the right.
18 If you need stronger refreshments than the water in the
19 back, there is a coffee shop area in the lobby.

20 A couple of courtesy reminders as we
21 continue with this meeting. First, please keep your
22 conversations to a minimum so that everyone will be able to
23 hear the speakers. In addition, please turn your cell
24 phones off or to vibrate. If you must take a call, we ask
25 that you leave the room.

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00005

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1 At this time I would like to introduce
2 the representatives from APHIS who are here. We have Dr.
3 Freeda Isaac, who is a veterinarian that works as Assistant
4 Director for the National Center for Import and Export
5 Animals for the APHIS Veterinary Service Headquarters in
6 Maryland. She is responsible for live domestic animals,
7 semen and embryos imported into the United States. She has
8 worked under various services since 1993, starting as a
9 field veterinarian in Maryland.

10 Dr. Jill Rolland is a Ph.D. with a
11 background in aquaculture. Since 2002, she has worked as a
12 fish biologist at the APHIS headquarters in Maryland where
13 she worked at the Western Fisheries Research Center for the
14 U.S. Geological Survey in Seattle.

15 Dr. Rolland, I would ask you to come and
16 be the director of comments.

17 DR. ROLLAND: Good morning, everyone.
18 Anecdotally, I know a lot of, or I see a lot of familiar
19 faces here this morning. I just wanted to start out by
20 giving some background on VHS. I'm sure many of you are
21 already familiar with the disease. I just wanted to provide
22 some background before we get into the public comment
23 section.

24 So, what is VHS? It is considered a
25 serious disease of certain fish species. It is listed by

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00006

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL

1 the OIE, which is known as the World Organization for Animal
2 Health, to which the U.S. is a signatory. It is listed by
3 the OIE. It is of the certain criteria such as the
4 seriousness of the disease and the ability for it to be
5 transmitted to areas where it does not exist previously
6 through international commerce.

7 The virus was first isolated in 1963,
8 although the disease was known from before then. It was
9 found in a trout farm in Denmark and it caused serious
10 disease and mortality and traveled in Europe.

11 Currently, we consider five strains of
12 VHS that are known. They tend to be from Europe, Japan, and
13 we have our own strain here in the United States and Canada
14 considered the North American strain.

15 VHS causes disease in susceptible fish.
16 And clinical signs include lethargy, darkening, pale gills,
17 hemorrhaging, and, ultimately, these symptoms can lead to
18 death in the fish.

19 Prior to 2005, VHS in the U.S. was due
20 to Type IV, which causes disease mainly in marine species in
21 North America on both the east and the west coast.

22 Here are some photos of diseased fish.
23 You see a trout with a distended abdomen from the citese
24 fluid, the darkened fish. You see hemorrhages on the fish
25 on the bottom left. And again you see some distended

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00007

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2 abdomens from the citese fluid in the peritoneum cavity.
3 Ultimately, these lead to death in the fish.

4 Here you see some external hemorrhages
5 on fish. These pictures were taken by a pond advisor for
6 Michigan State University in our more recent outbreaks.

7 So, why are we hearing about VHS now?
8 Well, as we mentioned in the previous slide, VHS was known
9 mostly from marine fish on the coast.

10 We now have a virus that has changed to
11 a certain degree. We are finding it in a new fresh water
12 environment where it has not been seen before, and in new
13 hosts, many of the fish species that previously had not been
14 considered susceptible to VHS.

15 There are no known treatments. There is
16 no vaccination. And we are concerned that there are the
17 unregulated movement of VHS susceptible species out of the
18 infected areas and that these put our farm populations at
19 risk.

20 There are some states that have state
21 regulations. They tend to be for salmonids only, salmon and
22 trout. They are very old and therefore they can be
23 effective in some places and ineffective in others.

24 There is the issue that there are
25 affected areas from VHS right now and unaffected areas. And
prior to our actions, fish were able to move from affected

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00008

1 1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
2 to these unaffected areas.

3 So, the current situation in the Great
4 Lakes is that VHS was first reported in April of 2005 from a
5 fresh water drum on the Canadian side of the St. Lawrence
6 River. This was a new location for VHS and a new species.

7 A second finding was reported in
8 December of 2005 from a muskellunge collected in 2003 in the
9 Great Lakes and also from some fish that were collected in
10 the fall of 2005, also in the Great Lakes.

11 So, here you see a map of the Great
Lakes area showing the situation as of this past spring and

12 summer. So, spring, summer, and fall of 2006, we had
13 multiple outbreaks of VHS occurring in the Great Lakes in
14 multiple species and multiple locations.

15 Some other things that were worrisome
16 include that the virus was isolated at temperatures that
17 were higher than those previously believed to allow for
18 viral replication. So, the locations from the summer
19 include Lake Ontario, Lake St. Clair, Lake Erie, Conesus
20 Lake in New York, which is part of the Great Lakes
21 watershed. It does not allow for actual fish migrations
22 from the Great Lakes to this lake due to natural barriers
23 and also the St. Lawrence River.

24 Here is a list of the fresh water
25 species from which VHS has been isolated. Of particular

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00009

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1 interest are some of the important sport fish that are found
2 in the Great Lakes, such as muskellunge and the pike, some
3 of the bass species, and also some of the main fish species
4 such as emerald shiners.

5 Here is a picture from one of the
6 mortalities that occurred. This is from gizzard shad. This
7 photo was taken by Dr. Bizer in Michigan during this
8 outbreak. So, you can see that in many cases, these were
9 pretty dramatic die-offs that were occurring in the Great
10 Lakes.

11 So, APHIS' authority to deal with a
12 finding will help, at least that we are the competent
13 authority for farmed animals. The Animal Health Protection
14 Act of 2002 gives us the authority to detect and control,
15 eradicate diseases of livestock. And we have previously
16 been involved with other aquaculture diseases, issues such
17 as salmon, which affects farm salmon in the state of Maine
18 and spring by the carp channel many of you are familiar
19 with.

20 So, why a federal order? The federal
21 order is the emergency action that is taken to prevent the
22 spread of a disease such as VHS. It is a temporary
23 administrative measure that is taken when there is not
24 sufficient time to write a regulation. We were concerned
25 that with these die-offs, there were fish living under that

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1 needed out of the areas that were infected to areas that are
2 not known to have VHS.

3 This federal order is temporary. It has
4 to be followed up by the rule-making process. The federal
5 order was issued on October 24th and was amended on November
6 14th to allow for movement under certain conditions.

7 So, the current provisions are that VHS
8 susceptible species are prohibited from moving out of the
9 eight states and two Canadian provinces bordering the Great
10 Lakes except under certain conditions.

11 Those conditions include movement to
12 slaughter when there is five-point disinfection, movement to
13 a research or diagnostic lab that also has adequate
14 disinfection, movement of live fish testing negative for VHS
15 virus by laboratory assays. And from Canada, the only fish
16 that are allowed to come in from those two provinces right

17 now are salmonids that meet U.S. Fish and Wildlife Service
18 Title 50 requirements.

19 So, our next steps and the reason --
20 part of the reason we are here today is to develop rules to
21 replace this emergency federal order.

22 We are considering several avenues, and
23 that is what we wish to receive comment on. The potential
24 scope of the regulations could be the affected watersheds,
25 the four states that currently have had outbreaks, the eight

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00011

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1 Great Lakes states that are currently under the federal
2 order, all 50 states, based on our lack of knowledge of
3 where VHS-susceptible and potentially infected fish have
4 moved out of the Great Lakes.

5 We can stick to the two provinces or our
6 import requirements could be for all countries. The
7 regulation could potentially be for just this new strain of
8 VHS, which we were calling VHS 4B, or it could be for all
9 VHS. The rule will provide for specific testing
10 requirements, which currently are not in the federal order.

11 So, what we need to do now is to define
12 the import requirements, such as what types of health
13 certificates, import permits, and ports that fish can be
14 imported into, fish that are susceptible to VHS, and to
15 define the interstate movement requirements, including
16 health certification, interstate certification of
17 inspection.

18 So, the purpose of these public meetings
19 is to receive public comment on the regulation of VHS. I
20 would like to clarify that it is not to receive comment on
21 the federal order itself, but the next steps we would need
22 forward in terms of the interim rule.

23 The input is being recorded. We have a
24 court reporter here with us today and it will be considered
25 during the rule making process. If you want to provide

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00012

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1 written comments, you can deliver those to us here or you
2 can send them to us by e-mail by the end of tomorrow. The
3 scope for turning in written comments as part of these
4 public meetings has to be during the course of the public
5 meetings.

6 However, once the interim rule is
7 published, there will be another comment period. So, you
8 can also provide comments once the interim rule has been
9 published. Our contact information is here on the screen if
10 you need to e-mail us. Or if you have any questions, you
11 can contact us at any time.

12 If you want more information on VHS, the
13 virus, the disease, there is official information up on our
14 web site, which is also written here on the screen. And now
15 I will hand it back over to Dale.

16 MR. RENDAHL: Thank you, Dr. Rolland. I
17 would like to describe the process that we use for the
18 public comment portion of this meeting. First, as Dr.
19 Rolland mentioned, this portion of the meeting is being
20 transcribed by this gentleman over here. Commonly when we
21 have public meetings like this, the transcript is published

22 on the APHIS web site. We have not received approval yet
23 stating whether they will have it on this case or not. That
24 is being worked out.

25 Each speaker will be called in turn by
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00013

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
1 the order in which they have signed up on the sheets in the
2 back. If you have not done so, get in place and sign up if
3 you are going to speak. Since we have a small group, we
4 will not have a specific time limit, but if it sounds like
5 they are getting too long winded or repetitive, I will stand
6 up and give you some heck and say, "You have said enough."
7 If there is time at the end of the
8 meeting, we may have some time for some additional comments
9 and questions. Except for some brief clarifications, if
10 they are appropriate, I will wait until the end for the
11 APHIS representatives to give some final comments or
12 wrap-up. And, again, the purpose of this meeting is to hear
13 your comments and what you think.

14 I want to make sure the expectations are
15 clear. First of all, we are not far enough along in the
16 process for people to answer all your questions or comment
17 on everything that is said. And particularly we are not
18 going to stay where we can make any decisions or
19 presumptions about what we have next within the process.

20 And as you begin your remarks, please
21 make sure you state your name and your affiliation. And if
22 you would come to the podium here so that you can be to the
23 microphone, it will be helpful.

24 Okay. The first person on the list is
25 Mike Freeze. Mike?

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00014

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
1 MIKE FREEZE: My name is Mike Freeze and
2 I am a representative of the Keo Fish Farm in Keo, Arkansas.
3 And, first of all, USDA is number one for the containment of
4 VHS in a specified and quarantined area.

5 Currently, a quarantined area is
6 comprised of eight states bordering the Great Lakes. And it
7 is within the quarantined area that initially should be
8 waived on technical requirements to allow the interstate
9 movement of affected live fish.

10 It simply doesn't make sense to
11 initially implement the same testing requirements for
12 interstate movement of live fish from Hawaii to California
13 that should be required to ship susceptible fish from a
14 known infected area like Northern Ohio to an unaffected area
15 like Alabama.

16 In an ideal world, all fish farms in the
17 nation should be inspected for VHS in a few weeks and
18 interstate commerce of susceptible live fish could resume
19 immediately.

20 However, in the real world, there is
21 only so many laboratories using APHIS-approved protocols and
22 there is only so many pathologists at these laboratories.

23 It is imperative that VHS inspections be
24 phased in so as to allow those aquaculture facilities in the
25 quarantined states to have unfettered access to APHIS-

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00015

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
approved laboratories all over the United States.

An immediate requirement for VHS testing for all aquaculture facilities throughout the United States would have a devastating impact on the legal interstate commerce of live fish.

To illustrate this point, consider that the fish held laboratory at the University of Arkansas in Pine Bluff, Arkansas normally handles about 4,000 fish disease cases per year. Following New York State's unscientific and overly burdensome regulation that required 60 samples per species per farm to ship live fish intrastate or interstate with no 150 fish maximum per farm as specified in the OIE testing protocol, the UAPB Lab was inundated with over 4000 samples in the month of November alone.

If USDA-APHIS suddenly requires all susceptible fish movement in interstate commerce to be VHS-inspected with no regard for the possibility of infection, then a quagmire will ensue and will almost certainly encourage the illegal interstate movement of live fish.

It is imperative that USDA-APHIS move quickly to establish a scientific-based VHS inspection regulation the state resource agencies can use as a template for their own regulations. But it must be done in an orderly fashion to avoid chaos.

As these states operate in a vacuum and

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00016

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
pass knee jerk regulations, like New York and California already have, is counter-productive to all.

Additionally, since most warm water aqua facilities have not historically tested for VHS, a single test of 150 fish per farm should be sufficient to allow a farm in a quarantined area to resume interstate shipments of susceptible live fish.

Each farm should be required to conduct VHS testing twice per year, as specified within OIE protocol, so after two years worth of negative tests, a farm could resume international shipments of live fish, provided they have met all the other OIE requirements.

Now, farms outside of the quarantined area should be allowed to ship all live fish without VHS testing and -- at least in 2007, but should be required to have at least one negative VHS test before being allowed to ship susceptible live fish in 2008.

Current states in federal VHS regulations concerning salmonids would remain in place and would be strictly enforced.

Although USDA-APHIS originally designated eight states and two Canadian provinces that border the Great Lakes as their VHS quarantine area and the emergency rule, the states of Minnesota, Wisconsin, Illinois, and Indiana should be removed from the quarantined

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00017

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
area in the interim rule until it has been scientifically demonstrated that VHS has been detected in Lake Michigan

3 and/or Lake Superior. Otherwise, why not quarantine all the
4 states along the Atlantic and Pacific coast that have marine
5 salmonids infected with the original form of VHS.

6 In return for removing these states from
7 the VHS quarantined area, an agreement could be pursued with
8 the National Resource Agency of each state to assist in an
9 intensified VHS sampling effort in Lake Michigan and
10 Superior.

11 Once again, the removal of these four
12 uninfected states from the VHS quarantined area will lessen
13 the testing burden on the USDA-APHIS approved laboratories.

14 If the removal of these four uninfected
15 states from the quarantined area is not acceptable to the
16 USDA-APHIS, then perhaps some sort of a secondary
17 designation, such as VHS susceptible states, be given the
18 four uninfected states in the interim rule, and they could
19 be allowed to initially ship live fish interstate, but would
20 be required to complete their VHS farm testing for
21 interstate shipment of susceptible species by late 2007 or
22 early in 2008.

23 It appears obviously that we are dealing
24 with a mutated form of VHS and it can affect warm water fish
25 species and fresh water and hence USDA-APHIS should not use

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00018

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL

1 the infection of a particular fish species in saltwater by
2 the original strain of VHS to assume that the same species
3 will be infected by the mutated strain of VHS in fresh
4 water.

5 If USDA-APHIS does use the infection of
6 a fish species in a marine environment with the original
7 strain of VHS to list that same fish species as susceptible
8 species in fresh water with this new mutated strain of VHS,
9 then USDA-APHIS must, in the interim rule, quarantine all
10 those states along the Atlantic and Pacific coast that have
11 marine salmonids affected with the original strain of VHS.
12 Furthermore, such a quarantine should be applied to all
13 susceptible fresh water and marine fish species in these
14 coastal states.

15 Finally, in the interim rule, USDA-APHIS
16 should only list species as susceptible in viable viruses
17 coming from naturally infected fresh water fish.

18 And I thank you for the opportunity to
19 submit these comments.

20 MR. RENDAHL: Thank you. Our next
21 speaker, James Neal Anderson.

22 JAMES ANDERSON: I'm James Neal Anderson
23 from Bay Fish North in Lonoke, Arkansas. My family has been
24 in operation for about 58 years. And we sell at this time
25 in about 33 different states. We have the opportunity to

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00019

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL

1 sell in other states, but we don't because of some
2 burdensome regulations.

3 I have several fears that come to mind
4 and I am speaking primarily of the whole baited or sole bait
5 fish industry. Basically, what we are running into at this
6 present time is the scare running rampant through these
7 state agencies as to what they are going to do about these

8 regulati ons.
9 I air freight into probably thirty
10 different states. We haul fish into those states in trucks.
11 And every state at this point is in a state of flux because
12 they are not sure what they want done.
13 And for us to deal with 33 different
14 sets of regulations for every state is a total nightmare.
15 And we are just muddling through it now because they don't
16 know, most of them, what they want done, you know, I assume,
17 within the next thirty (30) days.
18 So, what we need is a congruency
19 somewhere from what you people at APHIS feel is going to be
20 required. And I know you can't make the states conform to a
21 standard. It is going to be awfully difficult for us to
22 comply with every different state's regulation.
23 And the other thing is please don't add
24 any more burden to the commercial bait fishing raising
25 industry that we -- to handle and not do it to the entire
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00020

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
1 bait industry. I mean, we have done everything we know
2 possible to follow OIE standards of testing, and thanks to
3 Andy Gouilly and his staff. And we are very proud of those
4 results.
5 But, you know, there are a lot of bait
6 out there that has no way of being tested that we compete
7 against. And, of course, these inspections aren't cheap.
8 Staying within these standards aren't cheap. Operating to
9 keep these standards up is not cheap. And do not pile any
10 more straws on this old camel's back unless it is going to
11 be completely throughout the entire bait industry.
12 The main concern and the reason we
13 started being tested over five years ago is that we have a
14 fear of being found in a bait operation in Arkansas, because
15 most of us aren't that far apart. It is a pretty close knit
16 area of Arkansas. And while the drainage is the same, a lot
17 of the birds fly from one farm to the other, the fish are
18 swapped back and forth among farmers to some degree.
19 And, you know, I know this is a state
20 regulation probably, but I'm going to plead to the Arkansas
21 Game and Fish that they require these regulations coming
22 into Arkansas, some kind of standards in order to protect
23 our industry.
24 And I know in the past there has been
25 wild fish that have come into Arkansas and redistributed and
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00021

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1 some farmer -- (Inaudible). And it just cannot happen
2 unless they are certified. I have no problem with wild
3 fish, but they have got to be certified.
4 And those are my biggest concerns. I
5 appreciate your efforts in having these hearings and
6 allowing the industry to speak. And you have got a big job
7 ahead of you.
8 But I guess the number one problem being
9 on my list was the burdensome regulations of all of these
10 states being different and having different wording in them
11 and whatever. You know, you have got your own regulator in
12 every state, and every one of them are deciding what to do

13 and what to do differently.
14 If we could encourage them somehow
15 through this interim rule to accept -- allow even something
16 so everybody knows what page you are on before we ever
17 start. Thank you.
18 MR. RENDAHL: Thank you. Next we have
19 Mike Leffer.
20 MR. LEFFER: I didn't want to say
21 anything.
22 MR. RENDAHL: Excuse me?
23 MR. LEFFER: I didn't want to say
24 anything.
25 MR. RENDAHL: Okay. Moving on to
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00022

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1 Richard Byner.
2 MR. BYNER: I didn't have anything.
3 MR. RENDAHL: Okay. Paula Moore?
4 PAULA MOORE: Well, Mike and James
5 summed up, I think, most of our concerns and fears, but my
6 comment is more of a question. If this is a mutated form of
7 a marine virus, are the tests going to be challengeable, or
8 are they going to have false positives, are they going to
9 work specifically for fresh water species, the fresh water
10 mutated virus? How are you going to tell, like Mike was
11 saying, if you are using the marine as a standard, how are
12 you going to be able to specify that it is the North
13 American mutated virus type?
14 And my big question is: How are you
15 going to get farmers to volunteer to have their farms tested
16 if the regulations say that, well, there is no ability to
17 challenge and ask for further testing, that your farm is
18 just simply shut down and closed up?
19 Is there going to be a process where you
20 can say, "Wait a minute. Do -- I want further testing from
21 a secondary laboratory." We need some kind of a backup
22 system and make sure that your test is specific for this
23 type of virus in a fresh water type. That is about all I
24 have.
25 MR. RENDAHL: The last person I have
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00023

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1 signed up is Andy Goodwin.
2 ANDY GOODWIN: All right. Thank you
3 very much. My name is Andy Goodwin. I'm a professor at the
4 University of Arkansas at Pine Bluff.
5 I think we need to keep track of the big
6 goal here, which is to avoid spreading VHS from the Great
7 Lakes, but we want to do that without putting an unnecessary
8 burden on aquaculture. And we have got to look at what the
9 big risks are and make sure that we address those larger
10 risks and not get bogged down in smaller risks, more trivial
11 things that are easier to regulate, but aren't as much of a
12 part of the big picture.
13 I mean, the greatest risks are, clearly,
14 from a susceptible species harvested out of the Great Lakes.
15 And after that, it is on to fish that have close
16 associations with those infected Great Lakes.
17 And then way down the list are fish

18 farms in other parts of the country dealing in species that
19 may or may not be susceptible to VHS and having no
20 associations with the Great Lakes.
21 I think that the -- when we work on it,
22 we plan to work on those biggest risks and not waste the
23 funds and resources on very minor risks. And we have got to
24 make sure that we follow the Hippocratic oath here and do no
25 harm while we are trying to get a cure.

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00024

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1 For me, the biggest question is whether
2 or not we are going to devise a nationwide VHS program using
3 the OIE code as a model or whether we are going to take some
4 other route.

5 One of the biggest reasons to follow the
6 OIE code, I think, is to protect our exports of live fish.
7 But the U.S. has long been recognized as VHS positive,
8 anyway. So, most of the fish that are being exported are
9 already being exported from farms that have VHS testing and
10 meet their regulations. That is the result. So, we don't
11 really have to worry about impacts on our export. So, we
12 don't have to worry about the OIE code for export things.

13 Another thing that I have heard is that
14 we can't require regulations for fish coming into the U.S.
15 that we don't apply to interstate movements. And I have
16 heard several different sides of that and whether or not it
17 is true. But, I mean, we already do require things for fish
18 coming into the U.S. that we don't require for interstate
19 movements, like carp inspections, a required fish coming
20 into the U.S., but not for interstate movement.

21 So, clearly, there isn't a legal
22 requirement that we follow OIE standards for all interstate
23 fishing, because it is under an emergency order or an
24 interim ruling.

25 And if we do choose to follow an OIE

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00025

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1 route and inspect all movements between states of all
2 susceptible species and require OIE level inspections and
3 bio-security, like protected water supplies, then we are
4 going to cause a grievous harm to commercial aquaculture in
5 exchange for a minimal reduction of risk because we are
6 dealing with the things that are far down the list of risk
7 and not so much the main ones, which are fish coming out of
8 the Great Lakes.

9 Okay. What I would like to see us do is
10 not use the OIE as a model in the short term and instead sit
11 back and say what are the real risks here, what are most
12 likely ways for shipping to defer the virus be spread and
13 then figure out from there how to address those risks and
14 whether -- and then look and see if APHIS has the authority
15 and the finances to do it in an effective way. And we want
16 to make sure that we are spending our time and our resources
17 on addressing those risks and not just the things that are
18 easy to do or within the regulatory purview of certain
19 agencies.

20 When I look at what kinds of things I
21 would like to see done that would really prevent the spread
22 of the virus, I look at preventing the interstate shipment

23 of live fish from any water body that would be VHS positive
24 and perhaps unless laboratory challenges have proven the
25 species to be resistant to VHS, and it is easier to prove a
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00026

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2 negative than a positive on those, that the shipment, of
3 course, could be contaminated with any percentage of
4 susceptible species. And that is a big issue with a lot of
5 wild type fish.
6 You know, and I can see that we want to
7 prevent the interstate movement of fish raised on farms and
8 habitats that use water from the source known to be VHS
9 positive. That seems obvious.
10 I think it would be probably very
11 effective to launch a vigorous education program for farmers
12 and for state and federal hatcheries to explain some of the
13 risks and about VHS and where it comes from and how to avoid
14 them. And that would, hopefully, cause a lot of farmers and
15 a lot of agencies to instigate their own requirements for
16 fish coming out of their districts VHS inspected.
17 And I would like to see us establish a
18 VHS surveillance program on a national level so we will know
19 if VHS spreads from the Great Lakes or turns up on fish
20 farms in other places. For farms, that surveillance would
21 involve sampling and testing procedures rigorous enough to
22 count as an inspection.
23 With spring viaready, we did a national
24 survey with small numbers of fish, so I did from farms here
25 and there, that caused a lot of confusion between the
difference between a survey and surveillance and between
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00027

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2 inspection results.
3 The surveillance of farms would be
4 unannounced and it would include both random and directed
5 sampling. It would not be done at the request of farmers,
6 because everybody would want the free inspection. And that
7 wouldn't be the best way to go about it. And only those
8 states now known to be VHS positive plus any additional
9 states that were found culture positive should be subject to
10 VHS-related movement restrictions.
11 So, let's just worry about the movements
12 from places we know the virus exists to where there is
13 likelihood that it exists.
14 Relative to Neal Anderson's comment, we
15 want to expedite the part of the National Aquatic Animal
16 Health Plan that might provide guidance and standardization
17 to state authorities interested in establishing state
18 regulations requiring disease inspection.
19 For the farms I did, the current,
20 biggest threat related to VHS is all these states enacted
21 their own rules and every state's is different. And for
22 every jurisdiction, I had a different sort of fish and would
23 collect it in a different way and test it for different
24 diseases. And it is getting to be an even bigger nightmare.
25 Now, the other thing I will say is that
if APHIS does decide to require VHS testing on all fish,
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00028

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1 susceptible fish species, moving between all 50 states, if
2 it ends up going that route instead, we want to make sure
3 that we include only those species shown to carry culturable
4 VHS virus, not just PCR positive fish unless -- And so we
5 want only to include the ones we know are positive by the
6 culture.

7 If we wanted to go farther than that,
8 there is some concern about some very closely related
9 species that haven't been tested that come from positive
10 places, there may be a mechanism to say a fish are within
11 the same genus and kind as one that is positive and maybe we
12 should worry about that one.

13 And we want to make sure we look at farm
14 available inspections, not lot inspections, and that
15 everybody knows what that means, and that it should require
16 testing no less than 60 fish twice a year. And it should
17 require cell culture and confirmation methods.

18 That samples should be -- we don't want
19 to put too many restrictions on who can collect the samples
20 or who can do the testing, because there should be --
21 (Inaudible) -- for that.

22 We want to allow DBM's that fish held
23 inspectors of the OIE requires or even allows competent
24 state or federal official authorities. So, anybody that can
25 be trained to collect the fish can be allowed to collect the

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00029

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1 fish.

2 That fish should be allowed to move
3 interstate based on negative test reports. And you have to
4 go through a DBM signature or a certification form from
5 APHIS everytime, that would be very cumbersome.

6 We want to make sure that we don't worry
7 about the OIE requirement for protected water supplies. A
8 large percentage of U.S. fish farms use surface water. And
9 if we required them to use protected water supplies, most
10 farms wouldn't be eligible for the fish.

11 And then the other thing, and pursuant
12 to what Mike Freeze said, that if implementing a rule that
13 required all 50 states, that APHIS has to recognize that
14 there is not currently the expertise of the lab availability
15 with the state's regulatory frameworks to immediately carry
16 out such a program.

17 We need to invest the most critical
18 business, that everything else could be taken into the
19 disruption of the industry and after the state and federal
20 atrophy efforts.

21 The other thing I had here at the
22 beginning was more about the current emergency rule. And
23 I'm not going to suggest that we change it. I'm going to
24 suggest that we do a better job of explaining it.

25 Right now, in my dealings with states

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00030

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1 around the Great Lakes, I have a very difficult time finding
2 states that understand what their responsibilities are under
3 the emergency order, that they are to provide certification

4 for fish in leaving their state and going other places.
5 So, right now that is a huge impediment
6 to fishing events. Now, we need to explain to those state
7 authorities that they are responsible for certifying the VHS
8 as the fish are leaving the state and also to help them
9 interpret the Blue Book of the OIE code.

10 They are responsible for making sure
11 that the fish are VHS-free according to the Blue Book and
12 the OIE and that the Blue Book is -- you know, has choices
13 that can be made. And it very explicitly says that
14 regulators have to decide how many fish should be sampled.

15 And it has options for farm level
16 inspections or lot inspections. It doesn't say that you
17 have to follow this path to prove the fish is VHS-free. So,
18 the state authorities are trying to figure out how to make
19 those decisions, and that is slowing them down.

20 If you take the OIE route instead of
21 looking at the Blue Book and you go to chapter 2.1.5, it
22 says in the amended rule book that Chapter has every amended
23 projection for VHS that there is, including visible clinical
24 science. And that is not what we want people to do.

25 If you go all the way through that

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00031

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1 chapter, the very last sentence in it is the only one that
2 matters. And it says: "The diagnostic detection methods to
3 declare freedom of VHS, then the appropriate procedures as
4 described in Chapter 1.1.4., no VHS virus isolated itself
5 off of that." That is the only relevant thing in that
6 chapter.

7 From there you have got to go to other
8 chapters and follow footnotes and links. And for a state
9 regulator without a lot of experience in fish, there is no
10 way they can make it through that pathway and determine what
11 requirements there are for proving the fish are free of VHS.

12 Okay. With that, I will give it back to

13 Mr. Rendahl.

14 MR. RENDAHL: Thank you. That is the
15 end of those who have signed up. Since we have a small
16 group and it is early, I'm going to open it up to anyone
17 else who has something they want to say.

18 (No remarks offered from the audience.)

19 MR. RENDAHL: Okay. And I will ask Dr.
20 Rolland or Dr. Isaac to do some closing remarks. I do want
21 to thank you for coming this morning, for your constructive
22 comments, and for your courtesy to all the speakers. Thank
23 you.

24 DR. ROLLAND: I wanted to start out by
25 briefly addressing the one question that we have on

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00032

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1 laboratory methods. Currently, the methods that are used
2 for VHS testing are validated for salmonids and trout.

3 So, there have been some issues in using
4 those tests for these new species. And in temperatures,
5 however, and in the issues we have had, have been more false
6 negatives type issues than false positives.

7 That being said, we do have the ability
8 to sequence and determine the difference between 4B, the

9 mutated strain, or 14A, the strain that is known from other
10 hosts that are marine species. And also work is being done
11 to optimize those tests for these new species.

12 And if we were to find a positive, we
13 always send those samples on to a secondary lab, either our
14 National Interior Services Laboratories or to an OIE
15 reference lab, to confirm that diagnosis. We often ask for
16 a second sample as well.

17 So, as far as what the result would be
18 on a farm if you did test positive, we are not far enough
19 along in the process to determine if VHS will be something
20 that we would eradicate or a strain that we can refer. I
21 think that remains to be seen, depending on what -- how
22 widespread VHS may or may not be. So, it is certainly an
23 issue that needs to be addressed, but it isn't one that we
24 have a definite answer for at this time.

25 I do want to thank everyone for coming
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00033

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1 today and for providing these written comments as well.
2 Again, we will take your words into consideration as we
3 develop the interim rule.

4 I would also like to give Dr. Isaac the
5 opportunity to address you as well. We are here the rest of
6 this afternoon. We have this time. So, if you want to
7 speak with us or have discussions with us outside of the
8 formal format of this meeting, we are here as well. Yes,
9 sir?

10 UNIDENTIFIED SPEAKER: Could you explain
11 the procedure that established the susceptible species and
12 how additional species could be added to the list?

13 DR. ROLLAND: There is a difference
14 between the federal order and what will go into the interim
15 rule. When the federal order was -- that action was taken,
16 there were some species added, such as catfish, that were
17 based on -- it was on positives using only one test.

18 And we had followed subcultures that
19 didn't come up positive, and so that has been a concern to
20 many folks, and understandably.

21 For the interim rule, there will be
22 requirements for what will have a species on the list or off
23 the list. And that will be a scientifically based process.
24 We have naturally infected fish that test positive by two
25 testing, including isolation of the viral virus on a cell

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00034

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
1 culture as provided by the OIE.

2 UNIDENTIFIED SPEAKER: Did I hear you
3 correctly to say a naturally occurring virus cannot be
4 challenged?

5 MS. ROLLAND: Correct.

6 UNIDENTIFIED SPEAKER: Never a situation
7 where the position is challenged? Not never. You can't say
8 never.

9 DR. ROLLAND: No. We are looking at
10 naturally infected fish that test positive by a screening
11 and a preferatory test. Yes, Michael.

12 MIKE FREEZE: If a farm tests positive
13 for VHS for a susceptible species, how will that impact

14 non-susceptible species on that farm?
15 DR. ROLLAND: I think that would have to
16 do with whether or not they are co-mingled or not. And
17 these are things that we haven't thought through, but, I
18 mean, much like what we saw last spring with the carp, if
19 you don't have these species isolated, if they are on the
20 same water source, I think you would -- if you could use
21 some testing to prove that they are refractory and they are
22 not harboring the virus, then, you know, maybe something
23 could be done, but I don't know.
24 I don't want to say one thing for
25 certain one way or another, but it certainly is difficult
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00035

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1 when you have species co-mingling or they are not
2 destabilized, but are sharing the same water.
3 And how would you separate those out if
4 you were trying to depopulate as well? So, I think those
5 are some challenges that we have to figure out and think
6 about them.
7 UNIDENTIFIED SPEAKER: One quick.
8 DR. ROLLAND: Yes.
9 UNIDENTIFIED SPEAKER: When you test
10 for, at the farm level, do you test the requirements, say,
11 you know, for interstate transporting from the Great Lakes
12 area, are samples required from each alter unit, or just a
13 composite sample from the farm?
14 DR. ROLLAND: Right now, the federal
15 order doesn't specify that, but if you were going to follow
16 the guidelines, you would take a random sample that is
17 representative of the entire unit or farm, using the most
18 susceptible species. And if you had multiple susceptible
19 species, you would probably choose a mixture of those.
20 UNIDENTIFIED SPEAKER: I guess what I'm
21 asking is if you have a farm that has, say, 200 ponds, do
22 you try to take a composite of one fish from every two or
23 three ponds and have that tested?
24 DR. ROLLAND: You try to do a random
25 sample that is representative of the whole farm. So, if
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00036

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1 those farms are all connected by the same water source and
2 they all have fish that originated from the same breed
3 stock, et cetera, et cetera, you would not sample every
4 pond. You would sample a representative -- something that
5 represents the entire population on the farm as a whole.
6 PAULA MOORE: Is there a way to test
7 surfaces or water content itself for the clients, or does it
8 have to be isolated from the fish?
9 DR. ROLLAND: At this point, it has to
10 be isolated from the fish. There is no allocated method for
11 testing from water, although there are some labs that are
12 interested in developing an assay for that type of testing.
13 But it does not exist as of today.
14 PAULA MOORE: Surfaces or transport
15 tests?
16 DR. ROLLAND: There is no validated
17 method. You could do it, but whether or not that would
18 happen in reality is yet to be determined. So, that method

19 has to be developed.
20 UNIDENTIFIED SPEAKER: Has anything --
21 Is there any new information on birds affecting the virus or
22 is it -- can the virus be transported by birds at this
23 point? I mean, I have read something to --
24 DR. ROLLAND: I believe VHS tends to be
25 inactivated in the gut of birds due to the temperatures.
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00037

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL
1 Because of this mutated strain that has been found in higher
2 temperatures, I think that that may need to be revisited.
3 Whether or not it can be carried on the
4 surface of the animal like, you know, on the feet of a bird
5 that had picked up an infected fish, often that can happen.
6 UNIDENTIFIED SPEAKER: It is a question
7 of relative risk. And a little bit of water on the feathers
8 on a bird is nothing like the risk of moving a fish around.
9 DR. ROLLAND: That is right. I mean,
10 look at basic etiology 101. The greatest risk of moving any
11 disease, whether it is a human disease or an animal disease,
12 is a viral virus being carried by a host.
13 So, when it comes to flu season, you are
14 more likely the trace person getting the flu is coming into
15 contact with someone who is carrying the flu. Whether they
16 are showing symptoms or not, if they are carrying viral
17 virus, that is replicating. It is the same with animals.
18 That is the most efficient way to transfer a viral pathogen.
19 MIKE FREEZE: If you know, what are
20 the -- You said this virus could survive at higher
21 temperatures. Have you all -- Has anybody come up with a
22 temperature, maximum, or any idea?
23 DR. ROLLAND: No. I think it was the
24 finding from Conesus Lake that was between 60 and 70
25 degrees. And prior to that, many of the mortality events,
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00038

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1 people didn't take water temperature measurements. And so,
2 you know, there are a lot of research questions here that
3 need to be answered. And we are working with the different
4 funding agencies to try to get that work done as well.
5 MIKE FREEZE: The reason I ask is a lot
6 of our fish farms, at least in the south, I mean, our water
7 temperature can get up to 95 to 100 degrees Fahrenheit
8 because we have such shallow ponds. And so, you know, if
9 somebody is going to do tests, I wish they would carry it up
10 at least as high as the temperatures that we are having in
11 production ponds like catfish ponds and stuff.
12 DR. ROLLAND: All right. With that, I
13 will hand it over to Dr. Isaac for our veterinary questions.
14 MS. ISAAC: I also want to thank
15 everybody for coming. And I really appreciated hearing the
16 comments that were given and also some very good questions.
17 On the international aspect of it, in
18 terms of import regulations, we really have very little
19 knowledge of the affected species that we have on that list
20 of what is actually being imported. You know, we have an
21 idea what is coming in from Canada into the Great Lakes
22 area.
23 But what we would like to hear about is

24 if other people have knowledge of other importations that
25 are occurring, all the susceptible species, that would be
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00039

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1 great. And you can contact me or Peter, send us e-mails if
2 you have information on that.

3 And also what those impacts would be,
4 because we really don't know how to assess that. One of the
5 things that we saw in the SBC in providing those regulations
6 was trying to figure out what would be the best course of
7 entry to minimize impacts to the producers that were
8 imported.

9 So, what we do is we pick designated
10 ports of entry so that we are not doing inspections at all
11 ports. And we want to be able to, if there are increases
12 here that we import, import these fish, we want to be able
13 to pick ports out that are going to be still convenient to
14 them that aren't going to be an economic hardship.

15 Also, you know, in writing these regs,
16 we really want to take in what the economic hardships would
17 be as a result of the rule. So, anything that you guys can
18 provide on that.

19 Some other comments that we have heard
20 are excellent, and for others that didn't -- Actually, to
21 that comment, if you have the same comments to share, please
22 definitely send that in in writing as well, because that
23 just lets us know that there is more people that feel that
24 way.

25 So, even if somebody already said what
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00040

1/9/07 (VHS) PUBLIC MEETING - PEABODY MEMPHIS HOTEL

1 you had wanted to say, please share that with us in writing,
2 just shoot us an e-mail just saying the same thing. That
3 just puts in your vote in the sense for which way we need to
4 go, and we really appreciate that. That would be helpful.

5 So, thank you very much. I appreciate
6 meeting many of you and we will be around. So, please come
7 over and talk with us if you want. If you have any other
8 questions, let us know. Thank you.

9 MR. RENDAHL: All right. Thank you very
10 much. Have a good day.

11 Thereupon, the meeting adjourned.

12 * * * * *

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00041

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C E R T I F I C A T E

I do hereby certify that the foregoing transcript is a true, complete and accurate record of the proceedings of the public hearing.

I do hereby further certify that I am of neither kin, counsel nor interest to any party hereto.

James G. Parks
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