

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

IN THE MATTER OF THE
NADC WASTE DISPOSAL EVALUATION

INITIAL PUBLIC MEETING

Wednesday, August 23, 2006
8:30 a.m.
Ames City Hall
City Council Chambers
515 Clark Street
Ames, Iowa

PANEL MEMBERS PRESENT: LINDA A. DETWILER, D.V.M.
JIM COLBERT, Ph.D.
ROBERT P. ELLIS, Ph.D.
ROBERT G. ROHWER, Ph.D.
ALWYNELLE S. AHL, Ph.D.
FRAN KREMER, Ph.D.
CO-COORDINATORS PRESENT: STEVEN R. SHAFER, Ph.D., NADC
THOMAS W. NEUMANN, City of Ames

ALSO PRESENT: STEVEN L. SCHAINKER, City of Ames
JOHN R. DUNN, City of Ames

REPORTED BY: Suzanne M. E. Sogard, CSR, RPR

MR. SCHAINKER: Good morning, everyone. I am Steve Schainker, the city manager here in Ames. I want to welcome you to our community and thank you for agreeing to serve on this very important panel of experts. As you begin your work, I want to emphasize that the National Animal Disease Center has been a valued and trusted corporate citizen since its opening in our city many years ago. However, as you know, two employees recently questioned the effectiveness of the techniques that are being used at the NADC to destroy prions.

11 Now, while the NADC administrators have assured
12 us that there are no health risks associated with our
13 current and our past practices to deactivate prions, it is
14 the collective belief of the USDA and City officials that
15 an open and thorough review by an independent body of
16 experts is the best course of action to address the
17 questions that have been raised.

18 Now, let me assure you that we take this issue
19 very seriously. The review effort that you are about to
20 engage in is extremely important to us, since we have a
21 strong desire to guarantee a safe environment for the
22 citizens of Ames, citizens of Story County, the citizens
23 of the state, as well as the employees of the City of Ames
24 and the NADC.

25 It's also important to note, I think, that what

3

1 you determine during your review and any recommendations
2 you might offer through the course of your review, I think
3 will have benefits to other communities that host USDA
4 facilities.

5 So again, I want to welcome you to the city of
6 Ames. I want to thank you very much for agreeing to
7 participate. And we look forward to your final report.
8 I'll turn it over, then, to the two coordinators of the
9 project, Steve Shafer and Tom Neumann.

10 MR. NEUMANN: My name is Tom Neumann. I'm
11 director of water and pollution control for the City of
12 Ames. I'll give you a little background, and then we'll
13 kind of follow the agenda. However, if you feel the need
14 to change the agenda or -- this is an informal setting, so
15 ask questions as we go along if you need clarification,
16 additional information. This is -- We're operating very
17 informally. It's not structured in any way. So please
18 feel free to jump in at any time with questions or
19 comments.

20 This information was provided to us in early May
21 from employees, a couple of employees at the National
22 Animal Disease Center, advising us that the waste disposal
23 practices at the NADC were different from a facility
24 immediately adjacent, another USDA facility, the National
25 Veterinary Services Lab, which is adjacent to the NADC

4

1 facility in Ames, was handling prion-contaminated waste
2 differently and incorrectly, which would then permit the

3 prion-contaminated waste to enter into the city of Ames
4 sanitary sewer system and thus go through the city of Ames
5 wastewater treatment facility.

6 Obviously municipal wastewater facilities are not
7 designed to remove any of these types of wastes, and it
8 became an issue that we needed to evaluate. In
9 consultation with NADC officials in early May, we had a
10 press conference. We also had additional meetings in
11 which we identified a methodology and approach to
12 investigate the claims of improper waste disposal and to
13 identify hopefully enough information that would address
14 the question of proper waste disposal and also provide
15 public assurance that the activities were not being done
16 incorrectly and posed a threat to either our employees,
17 the city of Ames public, citizens of Iowa downstream of
18 Ames where our wastewater eventually reaches surface
19 streams and continues through the state.

20 It has taken us this long to get initiated, get
21 started. That's a combination of trying to get a number
22 of people that we've identified as having expert knowledge
23 in this field, to get them all to come together, knowing
24 that you have extensive schedules that you have to -- that
25 you're committed to. And we really appreciate the efforts

5

1 that you've made to commit to helping us address this
2 issue.

3 There have also been some issues with federal
4 requirements, not necessarily USDA requirements, but
5 federal requirements that apply to advisory panels and
6 committees that are formed to assist any federal agency.
7 And we've been working through those requirements so that
8 we could be ready to proceed with a panel of experts to
9 review the situation.

10 Our position, as Steve indicated, is that we are
11 not alleging that anything that has happened or has
12 happened at the NADC is wrong. What we know for a fact is
13 that they do things differently than an adjacent federal
14 facility does.

15 But the two facilities are different. Their
16 number and types of research activities that are going on,
17 the animals that are housed, they're different. So we
18 recognize that there may be acceptable disposal practices
19 that could be different. So from that perspective, we are
20 just trying to get factual information of what are
21 appropriate methods of treatment and disposal.

22 Another fact that you need to be aware of, that
23 we feel very strongly, in order to advance scientific
24 knowledge, research has to be done. So we're not looking
25 to change or eliminate what research is being conducted in

6

1 Ames at NADC and NVSL. That's information that is
2 essential to the advancement of knowledge in terms of
3 animal diseases, prevention, even protection of health for
4 the general public.

5 So research has to be done. We just want to make
6 sure that the by-products of that research don't have an
7 adverse impact on the city, on the citizens of the state.
8 And that's where we're asking for your help, to identify
9 appropriate methods. And then we will work with NADC
10 officials, USDA officials, if there are changes that need
11 to be made, to effect those changes to protect not only
12 the basic research, but the citizens with the by-products
13 of that research.

14 What we are -- what we identified in May at our
15 press conference were basically four issues. And I guess
16 I got ahead of myself. That's coming later. So to try
17 and follow the agenda, I guess at this point do you have
18 any questions? And maybe we'll give you the opportunity
19 to give a little -- introduce yourself, identify your
20 particular areas of expertise that you're bringing to the
21 panel. We'll try to -- We've seen your resumes. We only
22 have a couple of hours here, so we would ask you to
23 shorten your bios. a little. But if you have any
24 questions or -- We'll start over here with Dr. Detwiler,
25 would you like to introduce yourself.

7

1 DR. DETWILER: I'm Linda Detwiler. I'm currently
2 the assistant director at the Center for Corporate and
3 Public Veterinary Medicine at the University of Maryland,
4 which is a division of the Virginia-Maryland Regional
5 College of Veterinary Medicine. But prior to that most of
6 my experience has been with TSEs, especially in control
7 and prevention.

8 In 1985 I started with USDA's APHIS in Scrapie
9 and then was national coordinator in the late '80s. I
10 served on a panel for BAC and continued in that role until
11 I left USDA in 2003. I currently also do private
12 consulting for food companies, pharmaceutical companies in
13 risk reduction in the areas especially of TSEs.

14 DR. COLBERT: I'm Jim Colbert, and I am actually
15 a biology professor at Iowa State University. Prions are
16 not my particular area of expertise. My training is
17 really in plant biology. But I'm here as a citizen
18 observer on the panel. And I'm also here because I do
19 have quite a lot of interest in water quality in our local
20 area. I'm involved in a local watershed group called
21 Squaw Creek Watershed Coalition.

22 I am involved in an activity called Skunk River
23 Navy, which basically involves taking Iowa State
24 University students out into our local streams, doing
25 water quality and biological diversity observations, and

8

1 then hauling trash out of the streams. Over the last
2 eight years the Skunk River Navy has hauled 44 tons of
3 trash out of our local streams, and unfortunately we're
4 not through with that job. There's still lots there to
5 get.

6 So I'm here as a local citizen, interested
7 person, more or less a layperson with regard to prions.
8 But because my area of expertise is biology in general,
9 I'm hoping that I can at least be conversant in the issues
10 that are raised here.

11 DR. ELLIS: I'm Bob Ellis. I'm on the faculty at
12 Colorado State University. I'm a professor in
13 microbiology, immunology and pathology. My research
14 career has been devoted primarily to diseases of food
15 animals, but I've gotten into some other types of research
16 too along the way.

17 I've been the biosafety officer for Colorado
18 State University since 1997. And as the biosafety
19 officer, I do have the responsibility to ensure that the
20 research conducted at CSU is conducted safely and within
21 the guidelines and parameters that are available to use
22 for that research. We do some chronic wasting disease
23 research at Colorado State, and so I've had oversight of
24 that research over the last several years.

25 In addition to those professional activities, I'm

9

1 also a rancher. My brother and I have our family ranch
2 still in Wyoming. We're very aware of chronic wasting
3 disease. It is not really being detected in the area
4 where we ranch, cattle ranch. But still I'm very
5 interested, as said earlier, in the research that is being

6 conducted here at NADC and other places that would show
7 whether some of these prions are transmissible across some
8 of the species barriers or not.

9 DR. ROHWER: My name is Bob Rohwer. It's a
10 pleasure to be here in Iowa. I grew up in Muscatine on
11 the eastern edge of the state. I've been a TSE
12 investigator for thirty years, beginning at NIH. And I'm
13 now associate professor of neurology at University of
14 Maryland. My laboratory is at the V.A. Medical Center and
15 affiliated with the University of Maryland.

16 In the mid-80s while I was at NIH, I did some of
17 the basic studies that have gone into promulgating the
18 regulations for inactivation of these agents. They were
19 basic science studies on how they inactivate. And they've
20 been sort of instrumental in setting the standards that
21 have been adopted worldwide for this particular aspect of
22 the problem.

23 In that capacity, I sat on the WHO panel, and it
24 was myself and David Taylor who wrote the WHO inactivation
25 guidelines that the world medical community uses. I've

10

1 also been a consultant and a member of the TSE Advisory
2 Committee of the FDA over the entire existence of that
3 panel. And I have advised the USDA in the past as well,
4 not particularly on -- not on these particular issues,
5 however. I also consult for the European Commission.

6 So I think what I bring to this is a strong
7 fundamental knowledge of how these agents are inactivated,
8 the issues that do have to be addressed in making sure
9 that they do get inactivated. And will be very interested
10 in looking at just what measures the USDA has put in place
11 for this problem here at Ames.

12 However, I would like to say that there are a lot
13 of guidance documents out there for directing this
14 activity, and I'm sure that those were consulted in
15 putting this together, and I'm quite optimistic that we'll
16 be able to come to a satisfactory conclusion on this.

17 DR. AHL: My name is Nell Ahl. My training has
18 been in zoology, ecology and veterinary medicine. I
19 worked for the USDA for some years. I was in academia for
20 much longer than that. I'm now self-employed and a
21 consultant for several things but primarily in the area of
22 risk analysis.

23 While I was in USDA, I was the initial director
24 of the office of risk assessment and cost benefit

25 analysis, which was an office that Congress established

11

1 inside USDA as a watchdog agency over the rule making
2 activity. So I have been an overseer of policy making in
3 many areas including areas regarding agents involving
4 prions. As I said, I now do risk analysis consulting and
5 am semiretired and enjoy my grandchildren in California.

6 DR. KREMER: Good morning. I'm Fran Kremer, and
7 I'm with the U.S. Environmental Protection Agency, and I
8 am out of the office of research and development. I serve
9 as a senior science advisor in the engineering laboratory
10 in Cincinnati. I've spent my career working in waste
11 treatment and disposal issues over twenty some years, and
12 in recent years have been dealing with the prion related
13 issues, working with the states and trying to devise ways
14 that they can utilize existing infrastructure in managing
15 CWD waste. We've also dealt with some of the BSE issues
16 as well. So we're very much engaged in working with the
17 states on this issue.

18 And I presently am also working on the
19 Interagency Work Group for Prion Science, and it's a
20 federal agency effort to look at what are the science
21 issues related to prions, what's the state of the art,
22 what are the data gaps, and how we need to develop a
23 national plan to move forward on this issue. And I am
24 serving as the co-chair of the Persistence, Treatment and
25 Disposal Work Group right now, so I think the

12

1 deliberations and discussions here will be very valuable
2 in moving forward with the work on this group as well.

3 MR. NEUMANN: We do have two panel members that
4 were unable to be here. Steve, would you like to just
5 give a little --

6 DR. SHAFER: Yes. Dr. Katherine McMahon is with
7 the University of Wisconsin, and she's currently doing
8 research in the area of prions and their movement in the
9 environment. She's on international travel and couldn't
10 be with us this week.

11 The other panel member that's not here today is
12 Dr. Ermias Belay. He's with the Centers for Disease
13 Control in Atlanta. He's a human health expert in this
14 area. He had some problems getting here last night, so he
15 will -- he is, I believe, on his way this morning and will
16 join us early this afternoon.

17 MR. NEUMANN: He had plane problems. Explain
18 the --

19 DR. SHAFER: He actually got his plane in Atlanta
20 last night, and it took off and was hit by lightening in a
21 storm, and the plane had to return to Atlanta and wasn't
22 able to get connections to get here in time this morning.
23 So he's a good guy to try to -- try to be here with us
24 today, and it's important that we have his input, and I'll
25 be very grateful to him for his efforts to get here.

13

1 MR. NEUMANN: And next to me on my right is John
2 Dunn, the assistant director of water and pollution
3 control for the City. John, if you want to --

4 MR. DUNN: Good morning. My background is in
5 engineering and business administration. The closest I
6 got to prions was a biology 101 class, so a lot of this
7 will go way beyond me. What I'm going to be doing is
8 serving as an alternate for Tom. We're both available to
9 you while you're here in town these next couple days. But
10 over the next few months as you work, if he's not
11 available, I would certainly be available to provide
12 whatever assistance I can.

13 And one of the primary things that I'm going to
14 be trying to make sure that we can do is to make sure that
15 the purpose of what we're doing doesn't somehow get lost
16 in the process of doing it. We've spent an awful lot of
17 time the last couple of months trying to work out the
18 process. I will always be the one coming back saying: If
19 the answer is we can't do it that way, well, how can we do
20 it? So that will be kind of one of the roles that I'll be
21 serving and helping you with.

22 DR. SHAFER: My name is Steven Shafer, and I'm
23 the area director for the Midwest area of the USDA's
24 Agricultural Research Service. That's the management
25 structure in which the National Animal Disease Center is

14

1 embedded. My office is in Peoria, Illinois.

2 I'm not a subject matter expert in this. But for
3 the record, my academic background is in plant pathology.
4 I was a researcher on the effects of air pollution on
5 plants and soilborne microorganisms. I have some
6 background in risk analysis. For five years I was the
7 national program leader for global climate change research
8 in the Agricultural Research Service. And currently I'm

9 the area director and have been in that position for a
10 little less than a year. I was associate director before
11 that.

12 My role in this is not as a panel member. I need
13 to be very clear on that. I'm not a member of your group.
14 I'm charged on behalf of USDA to manage this process and
15 see that it gets done and work closely with Mr. Neumann,
16 who represents the City. And we will be your
17 co-coordinators but certainly not members of the panel.
18 We do not share your expertise.

19 MR. NEUMANN: Any questions so far? That's good.
20 Moving along with the agenda, then, the next item of
21 business is the panel charter. You should all have a copy
22 of that in your packet. And I will just briefly review
23 the issues as we identified and laid out with the USDA,
24 with NADC officials back in May as to what we were -- what
25 questions we had or what issues we need to address in this

15

1 expert panel.

2 We're asking the panel to identify scientifically
3 accepted methods for effectively destroying prions. We
4 want to make sure that we are implementing the state of
5 the art and understand what that is. That doesn't mean
6 that we need to go miles past what's necessary to find an
7 effective treatment or inactivation. We want to know what
8 levels of inactivation are achieved by different
9 methodologies and how those can best be applied in
10 particular areas.

11 We want to address and assess the concerns raised
12 regarding what is presently taking place at NADC and what
13 has taken place at NADC in terms of the destruction of
14 prions in past research. As we understand from NADC
15 officials, TSE research has been ongoing for a number of
16 years, initially involving Scrapie, which is an
17 indigenous, as I understand it --

18 Again, we're beyond my area, so I'm trying to
19 provide what information I have. As we indicated, this is
20 being taped, and it will be repeated for the Ames public
21 on our cable TV channel. So I'm trying to provide them
22 the same -- bring them up to speed to at least the level
23 of knowledge that I am. And that's not saying much.

24 But addressing what has been the practice at
25 NADC, recognizing that what might have been done in 1990

16

1 may have been the state of knowledge in 1990; and as
2 knowledge increases over time, have we seen increases or
3 improvements in the actions and activities at NADC.

4 We also want to determine the risk posed to
5 humans and to the environment from the research activities
6 relating to prions at NADC. We have staff that have to,
7 by the nature of their job, enter sanitary sewers.
8 Wastewater flows to our treatment facility where our staff
9 have contact with that wastewater. And it's important to
10 us, it's important to our staff to understand what the
11 risk, what the threats are to them in their daily
12 activities. And so we need to have information that helps
13 everyone understand what risk they have, they are and may
14 have been exposed to and will be exposed to.

15 We also are asking for information from you in
16 terms of if remediation is necessary at NADC, what
17 scientifically-based treatment, pretreatment,
18 de-activation can and should be identified and implemented
19 at NADC to provide an acceptable level of protection. You
20 won't be in the business of doing a design. You're going
21 to identify methods. And the responsibility, then, is for
22 the City of Ames and USDA and NADC to come to terms as to
23 what needs to be done, how fast it needs to be done, when
24 it needs to be done. Those are areas that you don't have
25 to worry about. That's an administratively contractual

17

1 relationship between the City of Ames and NADC.

2 So that's the four questions that we're asking
3 the panel to address and provide information to us on.
4 Steve, would you like to --

5 DR. SHAFER: Do you want to cover the
6 deliverables?

7 MR. NEUMANN: Oh, yes. We are expecting that
8 there will be a written report from the panel at the
9 conclusion of the investigation addressing the four main
10 issues. We are also anticipating that there will be at
11 least one additional public session at the end of the
12 investigative period when you deliberate your conclusions
13 and recommendations. And that will also be in this
14 chamber. It will be taped and recorded, and there will be
15 a meeting in the public just like this one.

16 And that time frame that we're looking at, that
17 we had discussed with USDA and NADC several months ago
18 would be approximately ninety days. If you can do it
19 quicker, that would be great. The questions are there,

20 the public interest is there, public concern is there. We
21 would like to be as open and transparent as possible and
22 address those issues as rapidly as we can provide good,
23 sound, scientific knowledge. And that's what we're asking
24 for your help in.
25 DR. SHAFER: Thanks. Well, again, good morning.

18

1 I'd like to start off by, like Mr. Neumann, thanking each
2 of you for agreeing to devote your time and expertise to
3 this issue and go about some business in public. That's
4 something that we really appreciate, that you're here and
5 making the effort to work with us on this.

6 I'd also like to thank the City of Ames for
7 hosting the meeting here this morning and, in general, for
8 being a good partner over several decades of USDA's
9 presence here in Ames. Mr. Neumann, as we said, is the
10 co-coordinator with me. He's on the City side. I'm with
11 the USDA side. And I'd like to thank him also for his
12 partnership in working to get us to this point.

13 We're working under certain laws and regulations
14 that guide committees and panels like this that are
15 providing input to the U.S. government and USDA in
16 particular. So I need to cover how you're going to be
17 conducting your work under these rules and regulations and
18 guidelines.

19 This is going to take a few minutes. You have
20 most of it in writing in front of you in form of the panel
21 charter. But for the benefit of just getting it all out
22 on the table and also letting others know who don't have
23 the charter in front of them, I'm going to take the time
24 and work through this. So bear with me as we go through
25 this.

19

1 We have some boundaries and parameters that need
2 to be observed by the panel. The purpose of your
3 committee is to evaluate the potential prion discharges
4 into the wastewater. Other issues that aren't related to
5 that, specifically to prion discharges and wastewater, are
6 outside the scope of the panel's activities.

7 If you come across some other issues that you
8 identify as important, this information should be provided
9 to Mr. Neumann and myself, the co-coordinators. But
10 except as it relates directly to this issue of prion
11 discharges, the panel shouldn't spend its time evaluating

12 NADC's internal administrative or personnel issues. These
13 are beyond your scope. You are a science and technical
14 panel.

15 Similarly, the panel is not charged with trying
16 to determine if any laws or regulations were violated. In
17 fact, we have a separate -- some separate questions going
18 on, separate activity related to that. Again, your
19 panel's work is to focus specifically on the technical
20 issues surrounding the potentially prion-contaminated
21 waste disposal practices.

22 While we would hope that you would all as experts
23 come to a unanimous opinion, I've worked with expert
24 panels before, and I know sometimes that doesn't occur.
25 Shocking thought. But you may not come to unanimous

20

1 opinions on every aspect of this issue. In fact, there
2 may be some dissenting opinions. And where it's
3 appropriate, the final report that Mr. Neumann mentioned
4 should make note of that. We want to know that. We want
5 to know where the uncertainties are amongst you. Where
6 you're in agreement, we need to know it. And where you're
7 in disagreement, we need to know that as well.

8 The minutes of meetings such as this one will be
9 public information and available to the public upon
10 request. You will be engaged in some activities that
11 aren't in the public, and that's mostly fact finding.
12 There won't be any minutes of those kinds of meetings
13 where you're gathering information. But any kind of
14 meeting like this in which decisions are being made and
15 deliberations being done, there will be at least detailed
16 notes. We have a court reporter here with us, and also
17 this meeting is being recorded.

18 We would like your conclusions to be based on
19 peer-reviewed science whenever that's possible and that
20 kind of material is available. However, considering this
21 particular area of research, we realize that there may not
22 be peer-reviewed papers out there on every possible angle.
23 In this case, we're relying on your expert opinions, your
24 expert background, your perspectives on this issue. And
25 you may wish to provide information that you know of or

21

1 other organizations are doing something or other
2 laboratories, where there's a benchmark for where we might
3 compare.

4 In some instances you may have to rely on just
5 your own professional judgment in the broad sense of what
6 you know about your own areas of science. If you do that,
7 we want to know what those are. We want to know what
8 those professional opinions are. But we want you to
9 identify these professional opinions specifically as your
10 professional opinion. That may be somewhat beyond the
11 scope of peer-reviewed literature that you can cite
12 chapter and verse to.

13 We would like to know, when you express those
14 opinions, what's the basis for it. In other words, when
15 you say "my opinion is this," to the best of your ability,
16 can you tell us why you think that? That will be very
17 important to us as we work through this.

18 I'd like to remind you and also the public that
19 you are acting as experts, as individual experts in your
20 field. You're not speaking as representatives or agents
21 of your specific federal agencies or your universities.
22 In other words, this is coming out of your expertise and
23 your knowledge of this subject. We're not asking for
24 endorsement by your respective agencies or universities on
25 this. This is your product.

22

1 Mr. Neumann said that we would like to have your
2 report in ninety days if at all possible. We would
3 really -- we would really like to try very hard to get
4 that from you within ninety days.

5 We're going to give you access to all available
6 information that we have on prions and as it relates to
7 waste disposal at NADC. Our records are available to you.
8 You may speak with NADC administrators, researchers,
9 animal care staff, environmental health and biosafety
10 staff. The facilities are open for you to tour, to take a
11 look around, to ask questions. We want you to thoroughly
12 examine this and give us your best shot at your opinion
13 and what you think, what your opinion is on this.

14 From my standpoint and also from Mr. Schainker,
15 the city manager, we are giving you access to the people
16 that you think you need to talk to, the records you think
17 you need, again, facilities, et cetera. You may use
18 public records that are available through relevant
19 agencies. You may use whatever information you think is
20 fit to address this question.

21 Now, this process is going to be under the
22 co-coordination of Mr. Neumann for the City of Ames and

23 myself for USDA-ARS. The way we need to -- We need to
24 make sure that information that's available to one of you
25 is available to all of you so that individual -- we expect

23

1 you to come at this from different perspectives because
2 you come from different areas of science and different
3 backgrounds. We expect that. But we want you all to have
4 the same information. So we need to coordinate that
5 information flow pretty carefully, and so we'll have some
6 comments about that.

7 But again, Mr. Neumann and I are not to be
8 thought of as members of the panel. We don't have
9 anything to contribute to the deliberation itself. Our
10 role is to make sure you have what you need to get your
11 work done.

12 So in terms of communications, we would like --
13 Mr. Neumann and I are asking that you communicate with
14 both of us. After you leave Ames either tomorrow night or
15 on Friday, you may well have other questions that arise.
16 You may have other documents that you have curiosity
17 about.

18 You have both of our e-mail addresses. What I'd
19 like for you to do is make those requests simultaneously
20 to both of us so that Mr. Neumann knows what you're asking
21 for and I know what you're asking for. That way if it's a
22 City thing, he can respond, and I can keep tabs on it and
23 know that he's gotten back to you, hasn't gone fishing or
24 something like that. And by the same token, if you're
25 making the request to me for information, he needs to know

24

1 what the nature of that is and whether I have responded
2 quickly for you. So any requests after you leave, we'd
3 like for you to e-mail that back to us. We'll work
4 together to get it to you and make sure that the other
5 knows what's happening.

6 You're going to develop your own methods for
7 conducting this evaluation. One of the nice things in
8 hiring an expert panel is we ask you your opinion and then
9 we step back. We're not going to tell you how to go about
10 this process. That's probably one of the first orders of
11 business I would suggest that you figure out is exactly
12 what process you're going to use.

13 But when at all possible, we would like all
14 members of the panel to be involved in anything.

15 Obviously, with eight people that are busy and have
16 various schedules and so forth, as we've already seen,
17 it's tough to get everybody in the same place at the same
18 time. So we are having a quorum.

19 There are eight of you. Two of you are missing
20 today. For the panel to do its official deliberative type
21 business, we're asking that five of you be available. So
22 if we can get a quorum of five, we'll meet. And for those
23 who aren't present, we'll get them the information and
24 summaries of what happened as quickly as possible. But
25 again, we want them to have the same information that you

25

1 have. But if we can get any five of you together at any
2 one time for the actual deliberative process, then that's
3 what we'll have.

4 Again, I don't want to be in the position of
5 telling you how to do your work. However, I'm going to
6 offer you one strong suggestion, and that is you choose
7 from among yourselves some sort of coordinator or some
8 sort of chair through which the communication process can
9 work. You may have questions that you then might funnel
10 through a chair person who then contacts us, however you
11 want to do it. But I can see some value in you choosing
12 from amongst yourselves some sort of a point person for
13 this. What you call that person, whether it's a chair or
14 coordinator or what have you, will be, of course, entirely
15 up to you.

16 Your meetings of this sort will be announced and
17 open to the public. This meeting was, in fact, announced
18 in the Federal Register. It was announced by the City at
19 least on your web site. I don't know if you had other
20 public communications or not.

21 Mr. Neumann and I will arrange for those public
22 communications. Once you get a date that you want to meet
23 or have some sort of a deliberative process, we need to
24 know far enough in advance so that we can put it in the
25 Federal Register and let the public know that this is

26

1 happening.

2 We're anticipating a minimum of two meetings of
3 this sort, this one and one at the end where you produce
4 your final report and brief us and the public on it. So
5 that's the minimum. Again, the rest of it, whether there
6 are others, this is something that you're going to have to

7 decide what you need to accomplish the work.

8 Here at this first meeting, the idea is to give
9 you the charge and have you come to grips with how you're
10 going to do this. Again, this last meeting we hope will
11 be no later than ninety days from today in which we hear
12 about your conclusions based on the information that you
13 pull together.

14 There will be a period of time, probably on the
15 order of thirty minutes, offered at the end of each of
16 these public type meetings for comments from the public.
17 Under the rules we're operating, if anybody wants -- from
18 the public wants to make that comment, they have to let us
19 know in writing ahead of time. For this particular
20 meeting, no one did, so we will dispense with that.

21 You will not be subjected to questions and
22 answers in the formal sense from the public. These are
23 opportunities for the public to offer their observations
24 and opinions on what's happening. But there will be
25 question and answer periods available where Mr. Neumann

27

1 and I can respond to things for you. But we don't expect
2 you to become your own press agents on this process.

3 Now, the next point that I need to make is pretty
4 important because of the rules and regs. and laws that
5 we're operating under. The federal regulations for this
6 panel require that the panel or any subset of you may not
7 engage in deliberations outside of the publicly accessible
8 meeting. Okay. So the process of consensus building,
9 debating about what you're hearing, disagreeing with each
10 other, coming to grips, coming to conclusions, whatever
11 process you're going to use for that, you have to do that
12 with public access, so these deliberations or any verbal
13 or written discussions intended to arrive at any kind of
14 consensus or conclusion. So you need to keep that in mind
15 as you plot out your process.

16 Now, in addition to these publicly accessible
17 meetings, you're going to engage in what we're calling
18 preparatory work or, if you prefer, fact finding. This is
19 the process that you will have access to documents,
20 people, facilities. This is just the information
21 gathering part. We have no quorum for that. Again, you
22 may request that. After you leave Ames and you need more
23 information, you may request that from us. And
24 Mr. Neumann and I will do our level best to get that to
25 you. So preparatory work, fact finding work is not public

1 activity. This is something that you just do as you go
2 about your business, and there is no specific quorum for
3 that.

4 But again, I would emphasize to you that as you
5 engage in those kinds of activities -- And you may discuss
6 amongst yourselves, for example, the kind of information
7 that you're getting, what you think additional information
8 you may want. But you may not actually engage in arguing
9 back and forth about what it means and trying to reach
10 those kinds of conclusions in private in that way.

11 Again, any questions that arise outside the
12 meeting, the preparatory work, we'd like to get those in
13 writing from you. Both Mr. Neumann and I would like to
14 get those. And we'll field them from the City or the USDA
15 as appropriate. We will provide secretarial support, note
16 taking support if you'd like. Today we have actual
17 minutes being recorded. But in your process of your work,
18 if you need secretarial support, we'll provide that.

19 Now, for some individual roles, again, you've
20 heard me mention co-coordinators. That's Mr. Neumann for
21 the City of Ames and Mr. Dunn who's the alternate when
22 he's not available. And I'll be serving that purpose for
23 USDA. And I'm not going to have an alternate, so if you
24 want to deal with the USDA, you've got to deal with me.

25 And then we a couple people that we've designated

1 as technical resources for facilities. You may have
2 routine questions about facilities and what's there.
3 They'll be available for any of your public meetings and
4 also available to you for your consultations if you want
5 it. That includes Mr. Dunn, who is with the City of Ames
6 wastewater treatment plant; and also Diana Whipple, who is
7 the acting deputy director of NADC and who is very
8 familiar with the facilities there. So those people are
9 available to you as technical resources for facilities.

10 You're the panel members, and you've got the
11 primary charge, so I won't go over that. We do have one
12 person on behalf of the USDA Animal and Plant Health
13 Inspection Service who's asked to be an observer. That's
14 Byron Rippke. Again, APHIS is co-located with us on the
15 campus at the edge of town, so they're very curious about
16 how this whole process is going to come out. And so
17 they've simply asked to have an observer. And, again,

18 this person's not a panel member. They don't have any
19 role in what you're doing other than to watch and listen.
20 In terms of the reporting process, the City of
21 Ames has established a web page so that the public has
22 information. So any panel agendas, meeting summaries, if
23 we have any, might be posted there, will be posted there.
24 The web page, I've got the URL on your chart there.
25 Printed copies of final reports and so forth and any of

30

1 these other documents will be available through the City
2 manager's office and the water and pollution control
3 department.
4 Again, if you get a press request of any kind, we
5 ask that you simply defer that to Mr. Neumann and me, and
6 we'll handle that for you. We may need to get some
7 information from you, but we would ask that you handle
8 that through the co-coordinators.
9 After the final meeting where you've presented
10 your report, we will ask you as a group to make a
11 conclusive presentation that will be open to the public,
12 will be open to City employees, NADC employees, anybody
13 who wants to hear about what you found. That will be wide
14 open.
15 And in terms of expenses, you're already aware of
16 this, but for the record, USDA is handling all of your
17 expenses in terms of travel and any other expenses the
18 panel may incur in the process of this work. That's all
19 being handled by the Department of Agriculture.
20 Now, that's pretty much what was written to you
21 on your charge. There's a lot of information there. Some
22 of it's a little detailed. I thought it was worthwhile to
23 go over it with you. I will stop at this point before we
24 go on with the agenda and ask if you have any questions or
25 comments. Dr. Detwiler?

31

1 DR. DETWILER: Yes, just a question. Some of
2 this came about in the differences in the protocols
3 between APHIS and yourselves and NADC. Will we have
4 access to the documents themselves as well, the protocol?
5 DR. SHAFER: Yes, yes. In terms of determining
6 what's the difference?
7 DR. DETWILER: Right, and so that we can actually
8 look at those in detail.
9 DR. SHAFER: Yes. Any other questions or

10 comments at this point? Dr. Ahl?

11 DR. AHL: Without having read all of the e-mail
12 exchanges, will we get a more clear understanding of what
13 are the past and present protocols at NADC?

14 DR. SHAFER: Yes, that will be -- that's wide
15 open for you. Any questions you need to ask, any written
16 standard operating procedures, all those will be available
17 to you. Any other questions at this point about your
18 charge? You may have them later, and we'll be available
19 to you, obviously, from this point on.

20 DR. KREMER: Just one quick question. Do the
21 balance of this review include what has occurred at the
22 facility as well as the potential handling in terms of
23 wastewater treatment plant issues as well?

24 DR. SHAFER: I'm not sure I understand your
25 question.

32

1 DR. KREMER: In terms of there's been discussion
2 with regard to potential risk that may occur if, in fact,
3 prions are discharged to wastewater treatment plants. So
4 again, not knowing, not having seen any information, are
5 the bounds of this discussion clearly defined only to the
6 procedures at NADC and stops there?

7 DR. SHAFER: Oh, in other words, if you have some
8 curiosity about what happens with the wastewater treatment
9 plant, is that what you're asking? If the panel would
10 like to go to the wastewater treatment plant and see how
11 things are handled there, that's certainly doable. Any
12 information, technical information about how the processes
13 work at the wastewater treatment plant, these guys sitting
14 to my right are the experts on that. I think any
15 documents that are necessary for you to make a
16 determination on this, they'll provide them.

17 Yes. It's the interaction between what's going
18 on at USDA and the City is the whole scope of what we're
19 investigating. So to determine risk, if you feel that
20 it's necessary to take a look at what's happening at the
21 wastewater treatment plant, that's available to you as
22 well.

23 DR. KREMER: Okay. Thank you.

24 DR. SHAFER: Anything else at this point? An
25 opportunity to stop for a breather, I guess. Okay. Well,

33

1 I think at this point, then, we'd like to step back and

2 turn this over to you.

3 We have some things that we have put on here, on
4 the agenda in terms of what we call process questions.
5 These are things that we thought might be useful for you
6 to get your discussion going, coming into this relatively
7 cold. So we've provided these. Whether these are the
8 questions that are on your mind at this point, feel free
9 to work on this short list of process questions here or
10 reject it entirely in favor of something else. But these
11 are some things that we thought might be useful to get the
12 discussion going relative to process.

13 Officially we are here until noon today. There
14 is no law that I'm aware of that says we have to be here
15 until noon today. So as soon as you people are
16 comfortable with how you want to proceed, as far as
17 Mr. Neumann and I are concerned, we can adjourn this
18 public meeting and get right to the preparatory work. The
19 initial stages are however you want to begin.

20 So at this point, Tom, unless you think we have
21 anything else, I think we should turn it over to the
22 panel.

23 MR. NEUMANN: No. If you have any questions?

24 DR. AHL: I guess I do have one more process
25 question. There's something about a written report no

34

1 later than ninety days from the present hopefully. And
2 then there's the opportunity or, I guess, the necessity
3 for another public meeting. These obviously can't occur
4 simultaneously. It seems to me as if we're going to have
5 to have another public meeting to discuss our findings
6 before there's a final written report. Is that --

7 DR. ELLIS: Can you define how we can conduct
8 conference call meetings and still have that be considered
9 a public meeting?

10 DR. SHAFER: That's something that -- That
11 question just came up yesterday, and I'm working to
12 clarify that, and I'll have an answer for that before you
13 get out of town. It would be very useful for us to be
14 able to have conference calls, I agree. How we can do
15 that and allow public access, the mechanics of that, I
16 need to find that out. But that's something that, in
17 fact, I hope by the end of today I can answer.

18 DR. ELLIS: Well, I think that would be in the
19 interest of everybody involved, definitely the panel and
20 definitely the public. Because in trying to pull this

21 panel together, you've seen some of the dynamics that did
22 and did not work on this one. And to me it would be a lot
23 more feasible to conduct a lot of this through conference
24 calls if, in fact, that will fulfill the public part of
25 this group. So that would be much appreciated.

35

1 DR. SHAFER: Well, I agree that would certainly
2 facilitate things. I guess the issues that I have to
3 determine are, of course, how do we provide public access
4 to the conference calls? What would be the mechanism of
5 that? These are the questions I need to find out. And
6 furthermore, we have to keep in mind that we plan those
7 far enough out that if those are considered to be public
8 accessible meetings, we have to do Federal Register
9 notice. The City has to be able to put its notice out.
10 So I agree that would facilitate things, but we still have
11 to adhere to some rules that we have with that.

12 DR. ELLIS: What is the lead time for both of
13 those -- with the Federal Register and the City of Ames?

14 DR. SHAFER: Well, based on the experience that I
15 had with this one, I would say a minimum of two weeks,
16 which I don't know if I can shorten it or not.

17 DR. ELLIS: Well, I don't think you need to
18 shorten it. I think that would work. Most of us probably
19 wouldn't have much less of a lead time than that either.

20 MR. NEUMANN: From the City's perspective, we're
21 much shorter time frame than the federal requirements. So
22 when that goes in the Federal Register, we issue a press
23 notice the same day. So that would provide ample
24 opportunity time wise for us.

25 DR. SHAFER: Because the process -- I mean, I can

36

1 generate a federal request notice pretty fast in my
2 office, but then the process by which it actually gets to
3 the Federal Register takes a little time. But as soon as
4 that's a public document, then I send -- as with this
5 time, as soon as I was notified that it was out, I sent
6 him an e-mail, and it was on their web site almost
7 immediately. So we can try to deal with that.

8 But again, whether or not that's going to be
9 acceptable or not, that's just a question that arose
10 yesterday, and I've got to get an answer to that, and I
11 hope to have the answer today.

12 MR. NEUMANN: And I think in response to your

13 question, it's entirely conceivable to us that additional
14 get-togethers prior to the final written report would be
15 necessary in order to work out some of the consensus
16 opinions and information. So you're right, they're
17 probably not likely going to occur simultaneously, the
18 last meeting and the written report. But hopefully the
19 report follows very, very shortly after that last meeting.

20 DR. AHL: Right. That was my concern, though, if
21 we hadn't actually met in some sort of deliberations, that
22 we couldn't exactly present a written report that was the
23 final answer.

24 DR. SHAFER: Understood. So that's part of the
25 process that you need to work out amongst yourself is how

37

1 do you want to accomplish that, and then tell us how you
2 want to accomplish that.

3 Okay. Well, in that case, we'll turn it over to
4 you and sit back, and as you have questions, we'll try to
5 field the questions. But, you know, as they said in the
6 Wizard of Oz, pay no attention to that man behind the
7 curtain. Pay no attention to us sitting out here looking
8 at you.

9 DR. AHL: Well, it looks like we need to select a
10 chairperson. And I'm willing to serve. I'm probably less
11 tied to schedules -- (Handed the gavel.) Oh, darn, that
12 was too easy. Okay, guys, I'm the boss.

13 Okay. I think we need to talk about some
14 procedural issues in terms of what comes first. And I
15 would suggest that information gathering on methods that
16 have already been developed to decrease and destroy prions
17 will be one of the first things we want to have in hand
18 before we try to evaluate past or present protocols for
19 anybody.

20 And I know you, Bob, have quite a bit of
21 experience in that area. Do you think that there's enough
22 information out there, science-based information, for us
23 to --

24 DR. ROHWER: Well, I think we should work with
25 the science-based information that is available, and there

38

1 is quite a bit of it. There's always room for more
2 information, and I think that ultimately may be one of our
3 recommendations, is that we recommend some more research
4 in this area. But, yeah, certainly we can put that

5 together.

6 And as I was mentioning earlier, we have the
7 official guidances of the WHO. APHIS itself has guidance
8 to people who are permitted to work with TSE agents, and
9 which not everybody in the field can reason with, and we
10 have -- because it seems to be somewhat more stringent
11 than necessary in some areas. And then I believe the
12 European Commission has guidelines. The United Kingdom,
13 who has had the biggest problem with TSE in the world,
14 certainly has their own regulations and guidelines. And I
15 would strongly suggest that we begin with those and work
16 back from that.

17 There's a lot of basic science as well that we
18 can look at. There's the old work that I did in the '80s.
19 David Taylor's done a lot of work since then. Robert
20 Sarvo [phonetic] has done some recent things. There's
21 been some work with the Japanese. To put together a
22 comprehensive review of this issue would be a major task
23 for somebody, and I quite frankly don't have the time to
24 do that right now. But we can put together -- Certainly
25 the guidelines are easy to put together. The recent

39

1 science, I think parts of that we can put together as
2 well.

3 DR. AHL: I had done some looking on the Internet
4 pub/net before these meetings and had found some very
5 recent material, some of which even is published. I was
6 questioning, and maybe it's a good time to ask you that
7 question. There was one paper from a clinical
8 investigational journal that said it was possible to
9 completely destroy all prions.

10 DR. ROHWER: Well, that's certainly true. But
11 it's contentious. Okay. And it's a very complicated
12 subject because prions intrinsically, from my work even in
13 the '80s, showed that they're not intrinsically that
14 different from viruses in terms of killing them. But
15 there's a common wastewater treatment problem associated
16 with them, which is the inactivation of the biophasic.
17 And so you have residual subpopulations that are much
18 harder to kill than 99.9999 percent of them.

19 And that's been a problem in vaccinology,
20 wastewater treatment, water purification, the agents that
21 it has -- the context in which the agent finds itself and
22 its associations with other material and that type of
23 thing. And this is something that we will have to

24 consider, I think, in our deliberations because that's
25 going to be extremely important in a wastewater discharge

40

1 from animals. Animals don't shed a lot of infectivity.
2 In fact, in the case of BSE in cattle, there's no evidence
3 they shed any.

4 And so it's a -- we're working probably with
5 very, very small amounts of infectivity. And the
6 context -- but the context in which it might be is mixed
7 with straw and things like. And those are things we have
8 to consider. And there is no direct research on that type
9 of inactivation actually.

10 DR. DETWILER: The other thing that I would
11 suggest I think it would be good for us to gather are --
12 as Bob said, the EU Commission has guidelines, but the EU
13 Scientific Steering Committee also has a number of
14 opinions on different methodologies and actually looking
15 at, you know, sometimes basic research, sometimes risk
16 type of assessments. And I think that would be another
17 good source of information for us to go to.

18 One other aspect -- So if we look at the
19 inactivation side, I think that's one. But I think the
20 other thing that we should gather information on is the
21 scientific information of what either secretions,
22 excretions or tissues would harbor infectivity and the
23 amount of infectivity that might be involved.

24 So I know in some of the documents it was
25 mentioned fecal material, urine, and I think it would be

41

1 good to gather the scientific publications that would give
2 us either indication there was infectivity,
3 noninfectivity. But I'd also like to see in that
4 information gathering, is that the sole thing that would
5 be going, or in the necropsies are there other potential
6 tissues that may be involved?

7 DR. ROHWER: I think if I could jump in here. I
8 think it's important to recognize that there -- I think
9 we're dealing with two classes of problems here. One is
10 laboratory waste, which is much easier to control, I would
11 guess, than excretions and secretions of animals because
12 there's a lot less of it. It can be treated in autoclaves
13 and that sort of thing to, you know, get huge excesses of
14 margins of safety because it's low volume, and ultimately
15 that material ends up being incinerated. So it gets

16 treated very differently.

17 I think that the real issue here, as I understood
18 it -- though we have not heard the whole problem yet and
19 actually haven't seen the charge against the NADC's
20 current practices -- but my understanding is that one of
21 the concerns is how do you handle a large animal like a
22 cow and its material that's cleaned up out of its stable
23 and goes into a waste receptacle and is treated, and is
24 that adequate?

25 That's quite a different type of problem than the

42

1 laboratory problem because really I think the laboratory
2 problem is something that we can deal with relatively
3 quickly in the sense that there are very stringent
4 protocols you can apply. It's easy to change them and to
5 make them more stringent if you have to. And really that
6 stuff should be sterile before it goes -- before it
7 goes -- as its ultimate output. And to the extent that it
8 gets incinerated, we all expect that it is sterile.

9 DR. AHL: That brings up a question that perhaps
10 we need to address to you. Are any of the tissues other
11 than urine, feces, saliva, whatever that comes from the
12 animals themselves, is there anything else going into the
13 wastewater? Is there any lab waste like tissues?

14 DR. SHAFER: Dr. Ahl, I guess I would ask you to
15 defer that to when we can get you into a situation where
16 you can interact with the people who can answer that
17 question. As you know, I'm a plant pathologist, and I
18 wouldn't be well-equipped to that. But certainly that's
19 the kind of question that we anticipate you asking.

20 DR. AHL: So we need to define that question.

21 DR. DETWILER: I would ask that too.

22 DR. ELLIS: And I think when we get to that
23 stage, this would be the time to compare NVSL and NADC
24 procedures so that we're looking at the whole picture all
25 at one time instead of bits and pieces.

43

1 DR. AHL: Right. Is there specific guidance at
2 CSU?

3 DR. ELLIS: Yes.

4 DR. AHL: Do you know anything about the
5 University of Wyoming's research in this area?

6 DR. ELLIS: I know quite a bit about it. I have
7 not seen their specific documents. I know more about the

8 premise behind the research that University of Wyoming is
9 doing and some of those outcomes. The day-to-day
10 practices, no, I'm not familiar with that.

11 DR. AHL: Okay. And the study at the lab.

12 DR. ELLIS: Right, the Sybille Wildlife Research
13 Unit. Again, that could be -- Those protocols, I'm not
14 familiar with those. I'm somewhat familiar with the
15 Colorado Division of Wildlife procedures.

16 DR. AHL: Could you get those for us?

17 DR. ELLIS: I can ask.

18 DR. AHL: You're closer to those sources than we
19 are.

20 DR. ELLIS: I'll be going through Laramie.
21 Probably won't have time to stop, but I can definitely
22 talk to colleagues there and I'm sure I can get that
23 information.

24 So I'll look for information on handling of the
25 animals and handling of lab as well as animal -- normal

44

1 day-to-day waste excrement from those animals from both
2 the University of Wyoming Veterinary and Animal -- well,
3 no, it would be the Veterinary Sciences Department, also
4 from Division of Wildlife at Sybille Research Unit, and
5 then the Colorado State University procedures. And I do
6 have those.

7 DR. ROHWER: And I'd like to point out one other
8 aspect of this problem. I think we also have to be
9 careful about distinguishing diseases. And there are two
10 TSE diseases that are horizontally transmitted. We know
11 that one is Scrapie in sheep and the other one is CWD.

12 And the BSE does not seem to be horizontally
13 transmitted. You can transmit it by feeding it, either
14 cows or humans. But it doesn't seem to be spread in the
15 environment, as far as we can tell. And we have excellent
16 epidemiological data from the United Kingdom supporting
17 that point, in particular a huge accident there with BSE.

18 And the requirements for waste treatment for
19 those two diseases are probably quite different as a
20 consequence. And we presume, but don't know for sure,
21 that because they're horizontally-transmitted diseases, in
22 some way the animals are shedding infectivity, enough that
23 it can be communicated from one to another, though that's
24 not a -- the actual method by which that's done is not a
25 proven point for either of those diseases.

1 DR. DETWILER: There's some routes, at least for
2 sheep, that are pretty much --

3 DR. ROHWER: Yeah, we know that birth waste from
4 sheep is contaminated. So that's an issue. But whether
5 sheep also shed it in other ways is not known. And it's
6 kind of presumed that CWD must be -- or it seems to be
7 much more communicable than Scrapie in sheep.

8 DR. DETWILER: And I think the other factor -- I
9 don't know how pertinent -- but take into consideration
10 the potential co-infection with the chronic inflammatory
11 condition, if there's anything in the records that would
12 suggest that, because then you might have even more routes
13 of transmission, specifically urine.

14 DR. COLBERT: Excuse me, if I could just jump in
15 here a second. I'd like to ask a question to you,
16 Dr. Rohwer, for my benefit, not being an expert in this
17 area, and perhaps for the benefit of the public as well.
18 Could you explain a little bit more about what it means to
19 be horizontally transmitted versus something that can't be
20 horizontally transmitted?

21 DR. ROHWER: What I mean by that is Scrapie and
22 CWD seems to be -- they seem to be contagious diseases,
23 they are contagious diseases. If you put an infected
24 animal into a flock of other animals or herd of other
25 animals, the other animals will contract the disease.

1 That doesn't seem to be the case with cattle, for example,
2 and BSE. Doesn't seem to be the case for humans either
3 and, of course, Creutzfeldt-Jakob Disease. So in the
4 latter case, the disease is transmissible, but it's by
5 really overt inoculation of the animal with the
6 infectivity of another animal. They're not going to get
7 it just from commingling.

8 DR. COLBERT: So that's the feeding part; you
9 would actually have to eat large quantities?

10 DR. ROHWER: Yeah, in the case of BSE, we know
11 it's feeding. In the case of CWD, it's not so clear.

12 DR. DETWILER: And not necessarily large. It's
13 now a milligram dose of brain material transmitted to a
14 cow orally.

15 DR. ELLIS: I think too when you said an infected
16 animal can transmit horizontally to other animals in a
17 herd, there is a very definite species barrier with CWD
18 and Scrapie.

19 DR. ROHWER: That's definitely true for all these
20 diseases, is there are very strong species barriers for
21 transmission between species.
22 Now, let me -- I think part of your confusion
23 about my remark is I was presuming something. I'm using
24 horizontal transmission as evidence of shedding, and
25 that's really what I'm getting at. In those two diseases

47

1 we have some indirect evidence that there is shedding of
2 some sort, so we have to be more concerned about it than
3 we do for BSE where there's no evidence at all that the
4 disease is being shed.
5 DR. COLBERT: Actually that leads me to a related
6 question, which I guess is really sort of a fact-finding
7 issue. What are we dealing with at NADC? Which of these
8 diseases? All of these diseases? Do we know that at this
9 point?
10 DR. AHL: Let me -- Just from reading materials
11 that have been provided in the packets we all received, I
12 think in the past it's only been CWD; is that correct?
13 DR. DETWILER: Scrapie, right?
14 DR. SHAFER: CWD and Scrapie.
15 DR. AHL: Scrapie and CWD.
16 DR. SHAFER: Yeah. We probably ought to defer a
17 lot of this, just to the opportunity to get you definitive
18 information where it's most accessible rather than in a
19 forum like this. Again, I'm not equipped to answer your
20 question. I'll have to defer to others. I'd really
21 rather wait till we have the opportunity to get you the
22 information.
23 DR. AHL: But there was some hint that they're
24 going to begin BSE research once this panel has finished
25 deliberations, so I think that needs to be part of the

48

1 consideration.
2 DR. ROHWER: They have a mission to study TSE
3 diseases, and so my guess is that we should consider the
4 whole spectrum.
5 DR. DETWILER: I agree.
6 DR. KREMER: I want to follow up too on the
7 materials discussion, in particular with regard to the
8 laboratory materials. We need to distinguish the solid
9 wastes versus the aqueous wastes that are generated and
10 make sure we have a training for both of those and how

11 those are managed. And again, the tour will be good.
12 There may be already a designation for what biosafety
13 level is operating in the lab and may answer some
14 questions right away in terms of how some of the employees
15 really handle that.

16 DR. AHL: I'd like for us to go back, and a real
17 practical question, since everybody's real busy, in terms
18 of looking at WHO guidance, the APHIS guidance, the UK,
19 the EU guidelines, and some of the basic science. How
20 accessible are those materials? Are they all on the
21 Internet?

22 DR. ROHWER: A lot of it's on the Internet. The
23 UK guidelines, I'm not sure how to find them.

24 DR. DETWILER: I can volunteer. I can contact
25 someone in the UK to try and query the UK as well the EU.

49

1 DR. AHL: Okay. Do we have someone that can help
2 us distribute materials to all of us quickly and easily?

3 DR. SHAFER: Yes.

4 DR. ELLIS: Can I interject something, again, a
5 point of clarification. Things such as this, when those
6 on the panel and you two as co-chair of the panel -- or --

7 DR. SHAFER: Co-coordinator.

8 DR. ELLIS: Co-coordinators, yeah. We've got one
9 chair, thankfully. -- and this information is made
10 available to the panel through your or whatever links,
11 then would those same materials be posted on the Ames web
12 site or somewhere else so that that also stays in the
13 public realm of accessibility? What are the parameters on
14 that?

15 DR. SHAFER: Well, I don't think -- I guess my
16 feeling is that we're in the business of providing you
17 with the information that you need to do your work. I
18 don't know that this is necessarily an effort to educate
19 the public on what material is out there. That stuff
20 isn't secret, obviously. It's publicly available on the
21 Internet to anybody that wants to Google it. I guess my
22 feeling is that I want to provide you folks with what you
23 need to answer the four questions that the City has posed.
24 One of those is not raw public education.

25 DR. ELLIS: Okay. That was what I wanted to hear

50

1 one way or the other, and that's an answer.

2 DR. DETWILER: So if we get this information, we

3 send it to both of you, and you will disseminate it?

4 DR. SHAFER: We will disseminate it. If you find
5 it and get it to Tom and me, we will get it to the rest of
6 you.

7 DR. ELLIS: And it's the same thing with the
8 material that Nell asked me to find regarding procedures
9 at Colorado and Wyoming, if those are hard copies, I can
10 send hard copies to you and you'll distribute?

11 DR. SHAFER: We will have a mechanism by which we
12 get them copied and FedEx'd to get in everybody's hand.

13 DR. AHL: Okay. And, Bob, could you easily
14 provide the URLs for the WHO guidance, the EU guidance,
15 and some of the basic science papers that are most
16 valuable?

17 DR. ROHWER: What I would suggest is that I work
18 with Linda on that, if we could work together on putting
19 together a package and sending it --

20 DR. AHL: Okay. So you two will work on that.

21 DR. DETWILER: Yeah.

22 DR. AHL: Okay. I think we've got to look at
23 that very quickly. And I know that I'm not even sure that
24 I have the time to be a complete reviewer of that. But I
25 think we all need to be at least familiar with it before

51

1 we proceed any further. So if we could get that back,
2 turned around in a week, is that -- That's pretty fast.
3 But if by this time next week we all had that, that would
4 be a great start, I believe, for us to go on.

5 Okay. So if we get our scientific methods for
6 destroying prions, if we get that information out, then we
7 can start looking at past and current NADC methods. And I
8 think we're going to have to wait until we do some
9 visiting of the facilities and with people both at the
10 City and at the laboratory. Before we do any assessing,
11 we've got to gather more information on that.

12 DR. SHAFER: Excuse me. One thing that just
13 occurred to me that might facilitate document distribution
14 is that if these things are available as PDF piles, or you
15 can at your own facility convert them to PDF files, we can
16 disseminate them electronically much faster.

17 DR. ROHWER: And, Nell, I'll also include the
18 SOPs from our own lab for the decontamination of waste.

19 DR. AHL: Okay. CDC also has material on all the
20 different human varieties that they use. And I'm
21 presuming that you will not be working with human

22 materials at NADC; is that fair?
23 DR. SHAFER: To my knowledge, we don't do human
24 medical research.
25 DR. AHL: So might we exclude that from our list

52

1 of prions that we concern ourselves with?
2 DR. SHAFER: Again, I guess I would urge you to
3 go back to the specific -- the prions and the wastewater
4 that we're dealing with at NADC. I think that will help
5 you focus the scope of your work. That's actually your
6 charge.
7 DR. AHL: Focus on the animal-borne prions.
8 DR. ROHWER: I don't think there's much of a
9 problem here, because the work that's been done has been
10 done almost entirely on rodents, and we're extrapolating
11 to the TSEs -- to the large animal and human TSEs anyway,
12 and so what we're going to be providing is a generic
13 response. It's not going to be specific to particular
14 diseases.
15 DR. ELLIS: One other source of information, if
16 it is available -- and I'm not at all sure it is -- but it
17 would be the chapter on prions from the BMBL that should
18 be coming out real soon. The 1999 edition had a chapter
19 in there on prions for the first time, and then I think
20 the 2006 edition should have an updated chapter on that.
21 I can inquire as to whether they would release
22 that chapter. It's my understanding that the whole
23 document is essentially done except for a few little
24 points that are holding up the whole document. And if
25 that would be released, that will help us a lot, because

53

1 this then would be the guidelines for all of the prion
2 work research in this country.
3 DR. ROHWER: What's the BMBL?
4 DR. ELLIS: The Biosafety in Microbiological and
5 Biomedical Research Laboratories.
6 DR. AHL: That would be excellent if you'd do
7 that for us.
8 DR. ELLIS: But I'm not sure they would release
9 one chapter. I really am not sure. It's probably more
10 likely they won't. But hopefully that whole document will
11 be out. Can't make any promises.
12 DR. AHL: If they will, it will be a godsend to
13 us and not have to wade through a bunch of stuff.

14 DR. ELLIS: Yes, I think that would be a very
15 concise way of assessing a lot of the things that we need
16 to assess.
17 DR. AHL: They've probably already reviewed a lot
18 of this literature.
19 DR. ELLIS: Yes.
20 DR. ROHWER: In the past, though, they haven't
21 dealt with things like the waste from pens and things like
22 that.
23 DR. ELLIS: No, they haven't.
24 DR. ROHWER: It's strictly laboratory, and a lot
25 of that stuff comes out of our own SOPs, so I'm not so

54

1 sure that will help us that much.
2 DR. ELLIS: It would help to be sure that we
3 weren't outside of that, I think is the main thing.
4 DR. AHL: Okay. Item two that the
5 co-coordinators have asked us to look at -- we're going to
6 have to wait for more information later today and
7 tomorrow -- risk to humans and the environment. And,
8 Fran, I'm hoping that --
9 DR. ROHWER: If I could just interrupt here.
10 There are some things, though, that I think that we're
11 going to want, under item two, and I hope that we will be
12 able to collect that during the next couple of days. One,
13 I would like to see the design brief of the system that's
14 being used for this at Ames --
15 DR. AHL: I'm sorry?
16 DR. ROHWER: The design brief, you know, how
17 they -- how did they come to the determination of what
18 they're doing and what were the rationales behind it, the
19 engineering, the implementation, and --
20 DR. AHL: Of current and past methods?
21 DR. ROHWER: No, I'm interested in their current
22 methods, I mean, methods that they're proposing to use for
23 BSE, which I think is probably the more important problem
24 here.
25 DR. AHL: Yes.

55

1 DR. ROHWER: And I think we need to define the
2 target inactivation, what we're actually dealing with,
3 because I think we will be able to separate that between
4 laboratory waste versus this kind of new category of -- I
5 don't know what to call it but --

6 DR. AHL: Husbandry waste.

7 DR. ROHWER: Husbandry waste. And I think it
8 would be good if we could see the wastewater treatment
9 facility, because there are issues there, and one of the
10 basic principles of managing TSE risk is to use more than
11 one method of control in the laboratory.

12 So we gown. We also disinfect. We do more than
13 one thing to protect ourselves, and we do more than one
14 thing for protecting the environment. We use typically
15 chemicals because they kill differently than heat. We can
16 use them together or in sequence or something like that.
17 But the wastewater plant is also going to have some sort
18 of processing that we should just be familiar with because
19 it may be inadequate. It's something that could add to
20 the overall risk security from this stuff.

21 The other thing that I think we would like to see
22 is SOPs, in particular, how that system is going to be
23 operated. Training is something that I'm very interested
24 in, how it will be maintained, and how the engineering
25 staff will be trained to manage it. These are all things

56

1 that we've had to deal with in my own laboratory. And
2 they're not trivial.

3 And then, finally, I think you're getting to risk
4 assessment and --

5 DR. DETWILER: Can I -- My understanding, though,
6 is that we are supposed to look back at the past also; is
7 that correct?

8 DR. SHAFER: To the extent that it helps you
9 determine whether or not we have a problem currently. I
10 mean, we're not interested in the past for the past's sake
11 necessarily, but --

12 DR. DETWILER: Right. But to see the adequacy,
13 is that correct? So we would require, then, the past.

14 I'd also like to add on there, too, there's one
15 thing to look at an SOP, but to talk to the people on how
16 it's really done.

17 DR. AHL: How it was implemented.

18 DR. DETWILER: How it was implemented, right, and
19 if that's been any kind of change.

20 DR. AHL: I would like to -- I'm not sure I want
21 to go down in the sewer, but I would like to know what
22 kind of exposure there is between the NADC facility and
23 the final wastewater treatment plant. Surely they're not
24 co-located.

25 MR. NEUMANN: No. We're about 5 miles apart.

57

1 DR. AHL: Okay. So there is some --

2 MR. NEUMANN: So there are lots of man holes
3 between here and there. So there is accessibility to the
4 city sewers all over town and as we move south of town
5 where our plant is located.

6 DR. AHL: And you can provide us more information
7 about that?

8 MR. NEUMANN: Certainly.

9 DR. KREMER: How do you manage your biosolids?

10 MR. NEUMANN: Biosolids are anaerobically
11 digested and then land applied, all of -- 100 percent land
12 applied, Class B biosolids, to agricultural cropland, corn
13 and soybeans, with some set-aside areas for the growing
14 season. When we can't be applying in the row crop areas,
15 we have some grasslands and some tree areas that we apply.

16 DR. KREMER: And what's your volume production
17 annually, roughly?

18 MR. NEUMANN: Approximately -- designed for
19 approximately 3 to 5 dry tons of biosolids per day,
20 about -- Well, that's a little high actually. About 600
21 to 1,000 tons per year in dry tons.

22 DR. AHL: I'm going to ask that we ask specific
23 questions later when we visit the facility.

24 DR. KREMER: Yeah, I was just trying to get a
25 handle of the big picture.

58

1 DR. AHL: Okay. It's pretty big. Okay. Fran,
2 Jim, Bob Ellis, you all have not indicated things that you
3 would like to see.

4 MR. COLBERT: I do have some questions. But they
5 fall into I think what you just defined as specific
6 questions. And so I don't know whether I'd bring up
7 anything else at this point in time.

8 DR. AHL: Okay. Bob Ellis?

9 DR. ELLIS: I'd like to agree that we need to see
10 the NVSL procedures for handling this waste and compare it
11 to the NADC. I didn't see a reason to chime in.
12 Everything else had already been pretty well covered.

13 DR. AHL: Fran?

14 DR. KREMER: I think just overall I'm interested
15 in the materials flow, what's coming from the lab, where
16 it's going to, from the aqueous and the solid waste point

17 of view so we have a good handle of the movement of
18 material. So, I mean, I'm very interested in going to the
19 treatment plant personally and looking at your operations
20 downstream from there as well, the land application
21 aspects as well.

22 DR. AHL: Jim, can you tell us more about the
23 flow from the treatment plant into the local streams? I
24 mean, I'm asking.

25 DR. COLBERT: I may not be the best person to

59

1 tell you that. As a matter of fact, I think they're
2 sitting right here. The treatment plant is downstream of
3 Ames. The effluent, as I understand it, enters a stream
4 called the South Skunk River and can be used on
5 downstream. The South Skunk is a direct tributary of the
6 Mississippi, so it enters the Mississippi in southeast
7 Iowa. Have I said anything wrong so far?

8 MR. NEUMANN: No. Sometimes we're the only flow.
9 We haven't said that.

10 DR. AHL: All right. So we'll get into specifics
11 of that, then, when we talk later.

12 DR. COLBERT: Certainly.

13 DR. AHL: Okay. Is there anything else under
14 item two on our charge that we want to ask about in
15 general? Let me just briefly review and make sure that
16 I've got everything.

17 We want a design brief of the current methods.
18 We want to define target inactivation lab waste versus
19 husbandry waste. We want to view the wastewater treatment
20 facility. I think all of us have a hunkering to see that.

21 DR. KREMER: After lunch.

22 DR. AHL: Oh, don't get so picky. We want to
23 look at standard operating procedures for the wastewater
24 treatment and maintenance and also the training; is that
25 correct?

60

1 DR. ROHWER: Uh-huh.

2 DR. AHL: We want to have some sense -- we don't
3 have to go see all the man holes and look down, but we
4 would like to know about the quality of the sewer, the
5 nature of the overflow from the sewer, if that ever occurs
6 with flooding and so on. And we want to look at NVSL
7 waste procedures, and we want to look at materials, both
8 aqueous and solid. Is that our list?

9 DR. DETWILER: Just put "past" with all those as
10 well. You said "current."

11 DR. AHL: That was only for the first one, but we
12 will ask past and present. And if there's any design
13 changes anticipated in wastewater treatment, that's
14 something that we would like to at least know that you're
15 thinking about.

16 DR. COLBERT: Dr. Ahl, I would like to add --
17 Again, this would fall into the category of questions that
18 really we're going to address later in more specific
19 circumstances. But everything's that's been discussed
20 thus far with wastewater have referred to the sanitary
21 sewer system. My presumption, although I don't really
22 know if this is true, is that any effluent associated with
23 the animal husbandry is entering into the sanitary system.

24 But one thing I'd like to be certain of is that
25 there is no possibility that it's entering into the storm

61

1 sewer system, which does not pass through the treatment
2 facility at all. It goes directly into the streams. I
3 certainly don't know that there's any reason to worry
4 about that. But that's one of the things I'd like to have
5 on our list that we cross off, that whatever kind of
6 aqueous waste that emerges from the husbandry portion goes
7 into the sanitary sewer system and there's no movement, no
8 flow into the storm sewer system. So just put it on our
9 list of things to check.

10 DR. AHL: Okay, very good. Good question.
11 Anything else? Okay. Taking a look at item three, the
12 risk posed to humans and the environment from current and
13 past methods for the destruction of prions. So we're
14 looking at the current and past methods of destruction and
15 assess -- yeah, the human -- or take a look at the risk
16 posed to humans and the environment.

17 Okay. Is there anything in particular that we
18 want to bring up here, or do we have -- Mostly I'm trying
19 to get a handle right now on the things that we want to
20 see today and tomorrow so our co-coordinators can plan our
21 schedule and make sure we get to see it. So is there
22 anything in particular here that we want to talk about in
23 those terms? I think that's almost going to be something
24 that comes after we have more information, deliberation on
25 this or discussion of this.

62

1 DR. ROHWER: Well, I think this is the place
2 where I would say that we need to discriminate between
3 laboratory waste and animal husbandry waste, because I
4 think those two waste streams are going to be quite
5 different. And hopefully the laboratory waste stream is
6 something that's been historically there for a long time
7 and they have effective ways of dealing with it. And we
8 may be able to dismiss that from our consideration. But
9 that --

10 DR. AHL: So that really refers us back to item
11 two, we want to look carefully at lab waste disposal.

12 DR. DETWILER: Very much so.

13 DR. ROHWER: Yeah. We have to look at both. And
14 hopefully we'll be -- there will be a clear discrimination
15 between the two. If not, our charge becomes much larger.

16 DR. ELLIS: I think our time would be a lot more
17 efficiently spent looking at those issues than it will
18 be -- I don't want to dampen your enthusiasm for the
19 sewage system, but if we find that really it hasn't gotten
20 into the sewage system, what's the point of going there?

21 DR. KREMER: Oh, I agree wholeheartedly.

22 DR. AHL: Except that sewage systems are
23 interesting to biomedical engineers.

24 MR. NEUMANN: And my livelihood.

25 DR. ELLIS: Labs are more interesting to me.

63

1 DR. ROHWER: I agree with you. I think it's a
2 secondary concern because we hope nothing gets to the
3 sewer.

4 DR. ELLIS: Exactly.

5 DR. ROHWER: But the sewer and the way that the
6 waste is actually treated could provide another layer of
7 protection than what they're actually doing, and I think
8 we should know that.

9 DR. ELLIS: Okay.

10 DR. ROHWER: Because it may be a built-in margin
11 of safety there.

12 DR. AHL: Now, it occurs to me that there are
13 some things --

14 DR. DETWILER: There will be scientific things
15 that we'll have to rely on here to pull, you know, risks,
16 as Bob mentioned before, chronic wasting disease, BSE, the
17 risk to humans. And I think those are things that we'll
18 want to cite. But we can be thinking of those as well as
19 any work that was looked at environmentally on how long

20 the prion lasts in the environment.
21 DR. AHL: And presumably some have reached there.
22 DR. DETWILER: Correct. I think if we find that
23 that's some possibility, then right, we have to cite this
24 as part of the risk assessment.
25 DR. KREMER: I think this all comes back again to

64

1 materials flow, because if you look at the total amount
2 generated, look at the volumes and then determine the risk
3 accordingly.
4 DR. AHL: Pollution factors involved.
5 DR. ROHWER: I think the other thing we need to
6 be careful about in defining risk is that we don't -- we
7 don't impose a higher level of risk reduction than exists
8 for the environment in general. I mean, there are -- We
9 know we have BSE in North America, and so there is some
10 shedding that's already going on. I mean, I think it
11 would be presumptuous of us to think that we've discovered
12 every cow that ever had the disease and --
13 DR. AHL: Right. Well, and we have deer and elk
14 in the environment living and dying.
15 DR. ROHWER: Exactly. We have deer and elk all
16 over the place. Scrapie is in the environment. So you
17 could take this to a ridiculous level that really doesn't
18 provide any extra protection from something that's already
19 in the environment.
20 DR. AHL: Thank you very much. Okay. Now, going
21 on to item four -- and that doesn't mean we can't come
22 back and look at some of these, but we need to get the
23 rest of our trip here organized so we can get the most out
24 of it. If remediation is needed, provide scientifically
25 sound approaches for corrective action or actions that may

65

1 be taken.
2 And I got to put my two cents in here. I've
3 already heard this, I've heard you say it. In reviewing
4 the literature that I looked at before coming to this
5 meeting, it's apparent that there's an awful lot that's
6 not known. And it seems like this lab -- I don't want to
7 put more on the ARS than necessary, but it seems that this
8 laboratory would be a wonderful opportunity for some
9 research to go on that would help guide future action.
10 We don't want to make it the prion risk lab of
11 the world, but it does seem that there's some research

12 that could supplement the work that's going on and ensure
13 help for other labs as well as assure people in Ames and
14 other places that the labs -- that the work is not
15 affecting citizens, families, farm animals, crops, et
16 cetera.

17 DR. ROHWER: I would second that. But I would
18 also say that there are plenty of labs who would like to
19 do that kind of research if funding was available for it.

20 DR. ELLIS: Well, I'd like to also -- That's part
21 of the mission of the labs here, the USDA labs, and it's a
22 very important part of the mission, and I don't think that
23 it should be construed that that mission should be diluted
24 or diminished. It's excellent research that's being
25 conducted here in a whole variety of areas but definitely

66

1 in the environmental prion area, as that one task force or
2 the one research team conducts their research.

3 The information that's come out so far regarding
4 some of these diseases from this laboratory has been
5 extremely important for both environmental applications
6 and food animal applications, regarding there's an awful
7 lot that's not known, but there's an awful lot that is
8 known also. And I think that needs to be recognized and
9 used as some of the basis for our findings on this.

10 As Bob said, prions can be destroyed. There are
11 mechanisms that are well-known, and there are new
12 mechanisms that are being published from time to time
13 also. They're not totally indestructible. They
14 definitely are destructible. And we just need to look at
15 the guidelines that are in place right now and make sure
16 that, number one, they're adequate, and number two,
17 they're being followed. And if not, then that brings us
18 down to number four.

19 DR. AHL: Anything else under number four that we
20 want to talk about this morning?

21 DR. KREMER: I think it's dependent upon what we
22 see.

23 DR. AHL: Okay. Obviously.

24 DR. ROHWER: I agree. That's the one thing that
25 really does come towards the end, that we should be

67

1 looking for, I guess.

2 DR. AHL: All right. Okay. In that case, let me
3 very quickly review what I have heard, and you all make

4 sure that I'm there so that we can proceed most
5 efficiently.

6 For item number one: Identify scientifically
7 accepted methods for effectively destroying prions. What
8 I understand is Dr. Rohwer and Dr. Detwiler are going to
9 get material, UK guidelines, the guidelines from WHO, the
10 APHIS guidelines, the EU guidelines, some of the basic
11 science that you know the literature better than most of
12 us. Dr. Ellis, you're going to get us guidelines that are
13 used in Wyoming and Colorado both at the universities and
14 from the wildlife labs. And you're going to get them to
15 us by sending them to Dr. Shafer and Mr. Neumann, who are
16 then going to turn around and distribute them to all of us
17 so that we have the same working basis.

18 DR. ELLIS: Right.

19 DR. AHL: And we hope that can be done in a most
20 efficient manner so that we can have the same information
21 to start with, we'll be working from the same page. All
22 right. That sort of summarizes what we're going to do
23 with number one. Okay. And we just said we're going to
24 look at all prions, since they're going to be doing work
25 on -- they've done work on Scrapie, CWD, BSE in the

68

1 future, and who knows what else.

2 Item number two: What do we want to see? And we
3 want to emphasize that we want to know the past and
4 present on this question. We've gone over this before
5 briefly, but it's the design brief of current and past
6 methods, define target inactivation of the lab waste
7 versus husbandry waste, and we want to look very carefully
8 at lab waste disposal. We want to look at the wastewater
9 treatment facility, and at least hear a dissertation on
10 the sewer. And I've got a lot of questions about that 5
11 miles. I've never known a sewer that didn't leak. I'm
12 sorry.

13 MR. NEUMANN: And you will never find a system
14 that doesn't leak.

15 DR. AHL: I was going to say maybe you've got a
16 perfect system here, and I want to know about it.

17 Then we want to know about the standard operating
18 procedures of your wastewater and treatment maintenance
19 and the training and so on that goes with that. I would
20 like to have some knowledge of the work at the laboratory,
21 the treatment in the lab.

22 DR. ROHWER: That's what I meant, the standard

23 operating -- the SOPs, what we want to know is the SOPs --
24 I'm more interested in the SOPs that are in use at ARS for
25 managing husbandry waste. That's the unique problem they

69

1 have here that's not shared by basic research labs like my
2 own. And I'm assuming we're interested in the SOPs, but I
3 don't think we have -- I'm more interested in what they do
4 rather than the SOPs to the wastewater end, just to see if
5 there's anything there that could help this mitigation.
6 And the SOPs is the ARS side. I'm interested in, again,
7 the husbandry side, the husbandry waste, but we also need
8 to look at the laboratory, what they do with their
9 laboratory waste.

10 DR. DETWILER: And I think that the point that
11 Bob had mentioned earlier, it's really important the
12 training that the caretakers receive, the laboratory
13 workers receive, and the clean-up at the laboratory. And
14 I'm curious, given now the research with Scrapie, is
15 whether sometimes that goes down the drain, and I would
16 have questions on that.

17 DR. AHL: Okay. And then --

18 DR. ROHWER: And I'd just like to add to this,
19 another big part of this is in operating one of these
20 facilities -- and I have one of the larger TSE labs in
21 North America -- you know, equipment does fail and you
22 have to train your engineering staff how to get in there
23 and work on it. You have to -- You know, the SOPs
24 encompass a lot more than just, you know, how do you hose
25 the stuff down the drain and who turns what valve.

70

1 DR. AHL: Training and compliance issues are very
2 important --

3 DR. ROHWER: Right.

4 DR. AHL: -- in that for sure. And we're going
5 to look at those things at NVSL too, or at least in a
6 comparative way we want to know what they do. We're going
7 to look at materials flow, aqueous and solid. And we're
8 going to look at lab effluent and does it ever go in the
9 storm sewer. And lab waste disposal again. Okay. That's
10 sort of the outline.

11 And then the risk to humans and environment is
12 actually going to stem from the other information
13 gathering that we do. And the remediation, if there's any
14 needed, and the research that we might like to see done

15 can come from later discussions.
16 Is there anything else that we want to put on
17 this list or talk about right now in this open
18 deliberative meeting before we go into getting some more
19 knowledge ourselves how we can proceed? Any questions
20 from the co-coordinators?
21 DR. SHAFER: No.
22 MR. NEUMANN: None for me.
23 DR. AHL: With that in mind, I believe we're done
24 until we can get some more information.
25 MR. NEUMANN: We can take a short break. In the

71

1 meantime, Steve and I will be available to any media
2 present for any questions before we get started on the
3 next step.
4 DR. SHAFER: We're adjourned. Thank you.
5 (The meeting was concluded at
10:13 a.m.)

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

72

1 CERTIFICATE
2 STATE OF IOWA
3 COUNTY OF STORY
4 I, SUZANNE M. E. SOGARD, a Certified Shorthand
5 Reporter in and for the State of Iowa, do hereby certify

6 that I was present during the foregoing proceedings and
7 took down in shorthand the testimony and other proceedings
8 held;

9 That said shorthand notes were transcribed by me
10 by way of computer-aided transcription; and that the
11 foregoing pages of transcript contain a true, complete and
12 correct transcript of the proceedings;

13 That I am not counsel, attorney or relative of
14 either party or otherwise interested in the event of this
15 suit;

16 IN TESTIMONY WHEREOF, I have hereunto placed my
17 hand this 19th day of September, 2006.

18
19
20

Suzanne M. E. Sogard, CSR
TR Court Reporters
P.O. Box 1866
Ames, IA 50010
(515) 292-2339

21
22
23
24
25