

IN THE UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF FLORIDA

CASE NUMBER: 9:03-cv-81110-CIV-HURLEY/HO PKINS

MAUREEN STEVENS, as Personal
Representative of the Estate of
ROBERT STEVENS, Deceased, and
on behalf of MAUREEN STEVENS,
Individually, NICHOLAS STEVENS,
HEIDI HOGAN and CASEY STEVENS,
Survivors

Plaintiffs

vs.

UNITED STATES OF AMERICA

Defendant

_____ /

The Videotaped deposition of PATR ICIA L.
WORSHAM, Ph.D. was held on Monday, February 7 , 2011,
commencing at 12:29 p.m., at the U.S. Army Re search and
Materiel Command, Office of the Staff Judge A dvocate,
521 Fraim Street, Fort Detrick, Maryland 2170 2, before
George W. Tudor, Notary Public.

REPORTED BY: George W. Tudor

1 APPEARANCES:

3 ON BEHALF OF THE PLAINTIFFS:

4 RICHARD D. SCHULER, ESQUIRE

5 Schuler, Halvorson & Weisser, P.A.

6 1615 Forum Place, Suite 4-D

7 West Palm Beach, Florida 33401

8 Telephone: b-6

9 Facsimile: 561.684.9683

10 Email: b-6

12 ON BEHALF OF THE DEFENDANT:

13 LEON B. TARANTO, ESQUIRE

14 KIRSTEN L. WILKERSON, ESQUIRE

15 United States Department of Justice

16 Civil Division, Torts Branch

17 1331 Pennsylvania Avenue

18 Room 8004S

19 Washington, D.C. 20044

20 Telephone: b-6

21 Facsimile: 202.616.4473

22 Email: b-6

25 (APPEARANCES CONTINUED on the Next Page)

1 APPEARANCES CONTINUED:

3 ALSO PRESENT:

4 JOHN SHERMAN, Videographer

6 PAUL WELLENS, ESQUIRE

7 Office of General Counsel

8 Federal Bureau of Investigation

9 935 Pennsylvania Avenue, N.W., PA 400

10 Washington, D.C. 20535

11 Telephone: b-6

12 Facsimile: 202.220.9355

14 JEFFREY B. MILLER, ESQUIRE

15 U.S. Army Research and Materiel Command

16 Office of the Staff Judge Advocate

17 521 Fraim Street

18 Fort Detrick, Maryland 21702

19 Telephone: b-6

20 Facsimile: 301.619.7250

21 Email: b-6

1 INDEX

2 Deposition of PATRICIA L. WORSHAM, Ph.D.

3 February 7, 2011

5 Examination By: Page

6 Mr. Schuler 6

7 Mr. Taranto 76

9 Exhibit No. Marked

10 Exhibit 255 Statement of Patricia L. Worsham 45

11 Exhibit 256 Report of Investigation 47

12 Exhibit 257 Assessment of spill incident 57

13 Exhibit 258 Sworn statement 62

14 Exhibit 259 Reprint of new article 67

1 PROCEEDINGS

2 THE VIDEOGRAPHER: We're now on the record

3 in the matter of Maureen Stevens, as personal

4 representative of the estate of Robert Stevens,

5 deceased, and on behalf of Maureen Stevens

6 individually, Nicholas Stevens, Heidi Hogan and Casey

7 Stevens, survivors, versus the United States of

8 America, in the United States District Court, Southern

9 District of Florida, case number

10 9:03-cv-81110-CIV-Hurley/Hopkins.

11 Today's date is February 7th, 2011, and the

12 time is approximately 12:29 p.m. This is the video

13 recorded deposition of Dr. Patricia Worsham, being

14 taken at 521 Fraim Street, Frederick, Maryland.

15 My name is John Sherman, on behalf of Gore

16 Brothers reporting a videoconferencing, located at 20

17 South Charles Street, Baltimore, Maryland 21201, Suite

18 901. The court reporter is George Tudor.

19 Will the attorneys please identify

20 themselves and the party they represent, beginning with

21 the party noticing this procedure.

22 MR. SCHULER: Richard Schuler, representing

23 the Stevens family and the estate of Robert Stevens,

24 deceased.

25 MR. TARANTO: Leon Taranto, civil division,

Page 6

1 Department of Justice, representing the defendant,
 2 United States.
 3 MS. WILKERSON: Kirsten Wilkerson with the
 4 Department of Justice, also for the United States.
 5 MR. WELLENS: Paul Wellens, with the FBI
 6 Office of General Counsel.
 7 MR. MILLER: Jeffrey Miller, Fort Detrick,
 8 United States Army.
 9 THE VIDEOGRAPHER: Would you administer the
 10 oath?
 11 Whereupon,
 12 PATRICIA L. WORSHAM, Ph.D.,
 13 called as a witness, having been first duly sworn to
 14 tell the truth, the whole truth, and nothing but the
 15 truth, was examined and testified as follows:
 16 EXAMINATION BY MR. SCHULER:
 17 Q Would you state your name, please?
 18 A Patricia Lynne Worsham.
 19 Q And what is your professional address?
 20 A 1425 Porter Street, Bacteriology Division,
 21 USAMRIID, Fort Detrick.
 22 Q And Dr. Worsham, have you ever had your
 23 deposition taken before?
 24 A I think so. Maybe not quite this
 25 dramatically, but --

Page 7

1 Q Once or twice before?
 2 A Um-hmm.
 3 Q Yes? Let me just explain some of the
 4 ground rules to you about depositions, okay?
 5 One is that every response has to be
 6 verbal. I have to ask you a question verbally and your
 7 response has to be verbal, as opposed to a shake of the
 8 head or a grunt, the way most of us speak in normal
 9 conversation.
 10 A I'll try to remember.
 11 Q Secondly, if you would wait until I'm
 12 finished with my questions before you answer, that
 13 makes a clean record so our reporter can take things
 14 down and can't take us both talking at the same time.
 15 A Okay.
 16 Q Okay? And thirdly, if any of my questions
 17 are garbled up or you don't understand them, let me
 18 know and I'll try and clarify them for you, okay?
 19 A Okay.
 20 Q And if we -- can we assume that if you
 21 answer my question, then, that you understood it, okay?
 22 A I hope so.
 23 Q Okay. What is your date of birth, Dr.
 24 Worsham?
 25 A b-6 .

Page 8

1 Q And where are you presently employed?
 2 A USAMRIID, Fort Detrick.
 3 Q And what is your position with USAMRIID?
 4 A I'm the division chief of bacteriology.
 5 Q How long have you been the division chief
 6 for bacteriology?
 7 A Since 2008.
 8 Q And what is your educational background
 9 that led you into the bacteriology division?
 10 A I have a bachelor's degree in biology and
 11 one in chemistry, I have a master's in microbiology.
 12 Q Hold on a second. Tell me the years that
 13 you got those and the institutions you got them from.
 14 We will go along chronologically, okay?
 15 A All right. In 1978, I got a bachelor's in
 16 biology and a bachelor's in chemistry from University
 17 of Missouri, Kansas City. My master's was in 1980 at
 18 the University of Illinois, Urbana-Champaign, and my
 19 Ph.D. Was 1984 in that same location.
 20 Q After you got your Ph.D. -- and your Ph.D.
 21 Was in bacteriology?
 22 A In microbiology.
 23 Q Microbiology. After you got your Ph.D. in
 24 1984, then where did you go to work?
 25 A I spent three years at the Washington

Page 9

1 University School of Medicine in St. Louis as a
 2 post-doctoral fellow.
 3 Q In what regimen?
 4 A I was doing medical micology. I was doing
 5 the pathogenesis of dimorphic fungi. Histoplasma
 6 capsulatum, specifically.
 7 Q You may want to spell a couple of those
 8 things now.
 9 A Histoplasma is H-I-S-T-O-P-L-A-S-M-A.
 10 Q And that -- I thought there was one other
 11 thing that you said, too.
 12 A Capsulatum would be the species. So
 13 C-A-P-S-U-A-T-U-M (sic). There's an L in there,
 14 sulum.
 15 Q And you said you did that until '87. Then
 16 where did you go after that?
 17 A I went to the U.S. Department of
 18 Agriculture in Peoria, the Northern Regional Research
 19 Center, where I did yeast genetics.
 20 Q How long did you do that?
 21 A I was there for about a year and a half.
 22 Q That takes us to about '89 or so?
 23 A Um-hmm.
 24 Q Yes?
 25 A Yes. It does.

3 (Pages 6 to 9)

1 Q What did you do? What did you do in '89?

2 A I came to USAMRIID in 1989. I was
3 recruited at the American Society for Microbiology
4 meeting the previous spring, so I arrived at USAMRIID
5 in January of 1989.

6 Q And what was your initial position at
7 USAMRIID?

8 A Principal investigator in the bacteriology
9 division.

10 Q When you started, were you working in any
11 particular area with any particular type of organism?

12 A I began working with bacillus anthracis.

13 Q And how long did you work with anthrax?

14 A Exclusively with anthrax, until probably
15 1993, and sporadically with anthrax after that.

16 Q Eventually, did your role change from
17 principal investigator to some additional role?

18 A Over the years, I have served as a steering
19 committee chair, I have served as a department chief, I
20 have served as deputy division chief. A number of
21 roles. I have served as lead supervisor as well.

22 Q And so -- and starting with USAMRIID in
23 '89, that would mean that you have been there about 22
24 years now, in effect?

25 A Afraid so.

1 Q Besides working with anthrax, what other
2 organisms have you worked with?

3 A At USAMRIID, primarily Yersinia species,
4 Yersinia pestis, yersinia pseudotuberculosis; I'm
5 beginning some work with Francisella tularensis,
6 tularemia.

7 I have had some experience with other
8 bacilli as well. Most people that work with anthrax
9 do.

10 Q All right, and from the time that you first
11 began working at USAMRIID, I understand from looking at
12 some documents that have been furnished to us that you
13 actually shared office space with Dr. Ivins.

14 A Yes.

15 Q And how many years did you overlap?

16 A It was a few years. I would say I probably
17 moved out of that office in the mid-'90s, but that's
18 just a guess. I don't know for certain.

19 Q And what was your relationship like with
20 Dr. Ivins in terms of -- let's start with a work
21 relationship.

22 A He was a very enthusiastic scientist. He
23 was a good mentor. He was always willing to share his
24 knowledge. I thought he did an excellent job with
25 training young scientists.

1 We got along well in the office, other than
2 he tended to talk a lot, and sometimes I needed a
3 little more quiet, but I would say in general we got
4 along very well.

5 Q When you changed offices mid-'90s, say
6 around '95, then, were you still in relatively close
7 proximity with Dr. Ivins?

8 A Just right around the corner.

9 Q When the anthrax letter attacks occurred in
10 the fall of 2001, how did you first find out about
11 them?

12 A I think the first thing I heard about
13 anthrax, as I recall, was that there was a case of
14 anthrax down in Florida, and there was some speculation
15 about how that individual had acquired anthrax. I
16 remember hearing various people postulating that it may
17 have come from the water on a trip he had taken to
18 North Carolina; that he might have been involved with
19 processing hides or hair from animals. That's the
20 first I heard of it. Before I heard about letters or
21 powdered anthrax, I heard about that case.

22 Q Okay. And did you go down to Florida?

23 A I did.

24 Q Did you participate in the autopsy?

25 A No. I'm a Ph.D., not an M.D. I wouldn't

1 have been much good at an autopsy.

2 Q I thought maybe you collected samples or
3 something like that.

4 A No. I went down to assist the
5 Environmental Protection Agency with evaluating
6 contamination in the AMI Building. So I didn't go down
7 until approximately the 15th of October.

8 Q And I don't want to get into great detail
9 about what you did there, but just generally, what did
10 you do to evaluate the contamination at the AMI
11 building?

12 A We set up shop in a tuberculosis
13 sanitarium. They gave us part of their laboratory
14 space. There were probably thousands of samples
15 brought in, most of them swabs, some of them vacuum
16 cleaning samples, a lot of different materials,
17 sometimes object would be brought in for sampling.
18 There were three of us down there initially, two people
19 from diagnostic systems division, and I was the
20 microbiologist, so we processed samples looking for
21 bacillus anthracis specifically, for evidence of
22 bacillus anthracis in an ECL assay,
23 electrochemiluminescence, looking for production of
24 protective antigens.

25 I don't believe we had any PCR going on at

1 that time; I think it was primarily ECL and culture.

2 Q Okay. Who were the other two people from
3 USAMRIID that went down?

4 A Neal Woollen, now Lieutenant Colonel
5 Woollen.

6 Q How did you spell the last name?

7 A I better get this right. It's W-- two O's,
8 two L's and I think two E's. Or just one E, actually.
9 And the other was his technician, who's Wes Carter.

10 Q And you said -- what division are they
11 from?

12 A Diagnostic Systems.

13 Q How long did you spend down in Florida?

14 A Between two and three weeks.

15 Q Was there any occasion where you had spoke
16 with my clients, the Stevens family?

17 A No. No, we were quite isolated in that
18 laboratory.

19 Q I know where the tuberculosis hospital is.
20 Itself, it's isolated, as I recall.

21 Did you speak with anyone else that worked
22 at AMI?

23 A I don't recall speaking to anyone other
24 than employees of the TB facility, members of the FBI,
25 the Environmental Protection Agency and CDC. And I

1 event as everyone else.

2 Q Okay. And I understand that a lot of time
3 has passed and some of these questions are pretty
4 general right now. If you don't remember something,
5 just tell me you don't remember and we will move on to
6 the next thing, okay?

7 A Okay.

8 Q Now, your -- you have been basically a
9 practicing bacteriologist for, well, over a quarter of
10 a century here, and you are, I understand, skilled in
11 the techniques of bacteriology, correct?

12 A There are many techniques in bacteriology.
13 I'm skilled in some of them.

14 Q Okay. And you're aware of the fact now at
15 this point that the FBI blames Dr. Ivins for these
16 attacks, correct?

17 A I'm aware that they say that, yes.

18 Q Okay. Do you agree with that?

19 A My personal opinion is no, I do not agree
20 with it.

21 Q Okay. And why don't you agree?

22 A Oh, there are a number of reasons.

23 Scientifically, beyond any personal interactions that I
24 had with him, I don't believe that we had the
25 facilities to make powdered anthrax. I don't think we

1 occasionally called USAMRIID to remind them that I
2 hadn't dropped off the map.

3 Q Okay. Who was your contact at CDC? Do you
4 remember the name of the person there?

5 A She arrived later. She actually came to
6 gain some expertise, because they were not prepared to
7 deal with the situation, and her first -- Laura Rose
8 was her name, so she came to get experience with the
9 culture and the ECL and the sample processing, but she
10 didn't arrive until probably the second week.

11 Q And after the two to three weeks that you
12 spent down there, then you came back up here?

13 A Yes.

14 Q Did you ever go back down again to do any
15 more work?

16 A No. When I came back, Pat Fellows went
17 down, and I don't know how long she spent; probably a
18 couple of weeks more.

19 Q Now, you -- when you came back here, did
20 you have any discussions with Dr. Ivins about the
21 attacks and how they may have occurred?

22 A I had discussions with many people.

23 Q I'm sure you did.

24 A I don't recall anything specific to Bruce,
25 other than he seemed to be just as horrified by the

1 had the facilities or the time to have made that huge
2 amount of material. I don't believe that Dr. Ivins had
3 the expertise to do that; I don't believe it was
4 trivial.

5 Q I'm sorry, don't believe -- what is
6 trivial?

7 A The expertise required to produce that kind
8 of powder. And from a personal standpoint, I simply
9 don't believe that Bruce had that in him.

10 Q Have you had occasion to review the on-line
11 FBI report?

12 A I can't say I read every word, but I have
13 looked at some of it.

14 Q Obviously there has been a lot of passage
15 of time now, and obviously a huge investigation took
16 place with lots of statements being taken. Did you
17 have your statement taken at any point?

18 A Meaning did the FBI interview me?

19 Q Yes.

20 A Yes.

21 Q On more than one occasion?

22 MR. TARANTO: I'm going to object on
23 grounds of law enforcement privilege as to the extent
24 and nature of contacts that the FBI had with any
25 particular individuals.

1 MR. SCHULER: I think I have got some sworn
2 statements here, so they have been produced and I was
3 going to ask her about it.

4 MR. TARANTO: Yes, but information as to
5 number of times that FBI met with a particular
6 individual reveals an internal process of the FBI in
7 their investigation and the law enforcement privilege
8 continues even after an investigation occurs.

9 MR. SCHULER: Well, I'm going to make our
10 position clear. I don't think asking about the number
11 of times she has been interviewed interferes with any
12 investigative privilege, so I'm going to let that
13 question -- I'm putting that question to you.

14 MR. TARANTO: All right. I will instruct
15 her not to answer. We will, of course, permit any
16 inquiry into factual information that Dr. Worsham has
17 and any facts, but not the -- not specifics as to what
18 communication she had with the FBI or the nature and
19 times of such communication.

20 MR. SCHULER: I'm not asking for what the
21 nature of the communication or the times, I'm asking
22 how many times she was interviewed.

23 MR. TARANTO: Right, and we have instructed
24 her to --

25 MR. SCHULER: I'm giving you a second

1 convinced by the scientific evidence presented by the
2 FBI that this preparation traces to USAMRIID.

3 Q Okay. Have you testified before the
4 National Academy of Science?

5 A Yes, I have.

6 Q Was that testimony relative to the
7 scientific portion of the analysis of the anthrax?

8 A It was purely scientific. There were no
9 questions regarding my personal opinions about anything
10 other than the science that I had conducted.

11 Q Have you been advised when the National
12 Academy of Science might come out with their report?

13 A I have not.

14 Q It's long overdue, I understand.

15 A I have not been advised by them recently.
16 The last thing I heard, I read in the press, just like
17 everyone else.

18 Q Which is what?

19 A That they were supposed to come out with a
20 report in February.

21 Q This month.

22 A I'm not sure they gave the year.

23 Q Okay. February of some year. Okay. Let
24 me ask you a little bit more about the science. The
25 breakdown of some of the reasons why the FBI believes

1 opportunity to reconsider.

2 MR. TARANTO: We have considered again and
3 redirect that again.

4 MR. SCHULER: Let the record reflect I'm
5 going to have to come back here and retake this
6 deposition, then, and I'm going to seek costs and
7 attorneys' fees for having do it against the United
8 States of America --

9 MR. TARANTO: And we will oppose that
10 vigorously.

11 MR. SCHULER: -- for the frivolous
12 objection.

13 MR. TARANTO: Our objections are not
14 frivolous.

15 Q All right. Now, Dr. Worsham, I want to go
16 back to my original line of questioning here, and I
17 asked you whether you thought that -- whether Dr. Ivins
18 did this or not, and you kind of broke it down on two
19 bases, one, a scientific reason supporting your belief
20 that Dr. Ivins did not do this, and the personal aspect
21 correct?

22 A There is probably additional aspects as
23 well.

24 Q Okay, and what would those be?

25 A Those would be that I have not been

1 that Dr. Ivins was the perpetrator here was because he
2 had developed or created this RMR 1029 in a flask, I
3 guess, in his lab at some point, and had exclusive or
4 access to it or controlled access to that flask over a
5 period of time. Is that your understanding?

6 A I wouldn't say that it was developed. It
7 was a mixture of materials prepared at Dougway Proving
8 Grounds and materials prepared at USAMRIID, so I would
9 say he mixed that preparation.

10 Did he have exclusive access to it? No.
11 It was retained inside BLS 3 and there was limited
12 access to BLS 3, but that particular piece of culture
13 was not exclusively in his possession.

14 Q Who else would have had access to it when
15 it was in the BLS level 3 lab?

16 A Anyone who had access to that area.

17 Q Can you give me some example? I mean,
18 would these post-doc students have access to it?

19 A I wouldn't call post-docs students.
20 Students don't generally go into containment. Some of
21 our postdoctoral fellows did go into containment.

22 Q Okay, maybe my language is not accurate.
23 Post-doc fellows, some of them would go in there?

24 A Um-hmm.

25 Q So they would have access to it?

Page 26 1 will? 2 A It could be somewhat of both. 3 Q And what -- do you have a Reader's Digest 4 version of -- explanation of why you believe that? 5 A I think I summarized it before to a certain 6 extent, in that I don't believe that we had facilities 7 at USAMRIID to make that kind of preparation. It would 8 have taken a great deal of time; it would have taken a 9 huge number of cultures; it would have taken a lot of 10 resources that would have been obvious to other people 11 within containment when they wanted to use those 12 resources. 13 We did not have anything in containment 14 suitable for drying down anything, much less a quantity 15 of spores. The lyophilizer that was part of our 16 division was in noncontainment. If someone had used 17 that to dry down that preparation, I would have 18 expected that area to be very, very contaminated, and 19 we had nonimmunized personnel in that the area, and I 20 might have expected some of them to become ill. 21 Q And maybe I misunderstood you, because I 22 wanted to ask you those questions that you just 23 answered, but what you just talked about, though, was 24 the actual production capability, correct? 25 A It's part of the science.	Page 28 1 also sent out to other locations. 2 Q Didn't the FBI, though, isn't one of the 3 things they maintained was that Dr. Ivins did not give 4 them an accurate sample, did not disclose the RMR 1029 5 initially when they were conducting samples? Do you 6 remember that? 7 A That may get into areas where I have had 8 discussions with the FBI. 9 Q I'm not asking -- I don't want you to 10 testify about any discussions you have had with the 11 FBI. 12 MR. TARANTO: So you're asking her, leaving 13 aside any communications or information that she has 14 been given by the FBI, does she have factual 15 information concerning this issue? 16 Q Well, let me rephrase the question, okay? 17 In the report that they have published on line, one of 18 the bases for pointing the finger at Dr. Ivins, if you 19 will, was the fact that he did not supply them with a 20 sample of RMR 1029 when they made their initial 21 request, okay? Do you recall that? 22 A I recall that I read that, yes. 23 Q Okay. And so doesn't that -- and I'm not 24 trying to be argumentative with you, I'm just trying to 25 find out the bases of your opinion, here and based on
Page 27 1 Q What I was talking about more was, you 2 know, the science pointing to RMR as the source itself. 3 A Okay. 4 Q Is that something that you disagree with or 5 just haven't been convinced yet? What's your position 6 on that? 7 A I think that there were four morphs that 8 were pursued during the course of this investigation 9 that were present in RMR 1029. 10 I'm aware of other morphs that were never 11 pursued. I would like to have seen the results of 12 that. I think that that would be more conclusive in 13 trying to tie a relationship between those Dougway 14 preps, the RMR 029 preps that were made from the 15 Dougway preps, and what was found in the letters. So I 16 think that that was incomplete. 17 I guess my larger scientific concern is 18 that the FBI based this interpretation on what was in 19 the repository, and my personal opinion is, if someone 20 had committed this heinous act, they probably would not 21 have sent the FBI an accurate representation of what 22 they had in their collection. 23 So did the FBI have one hundred percent 24 representation of every Ames culture in the world? I 25 seriously doubt it. And I do know that RMR 1029 was	Page 29 1 your expertise. 2 Doesn't that sort of fit in with what you 3 just said, if Dr. Ivins was the perpetrator, he would 4 be reluctant to give them that sample? 5 A I will say -- and I don't think this speaks 6 to what conversations I had with the FBI -- is, 7 initially, I think people were under the impression 8 that they were to submit their stock cultures, and 9 stock cultures are not liquid 4 preps, they're minus 70 10 freezer preps. I think that only became more clear 11 later on. 12 And secondly, based on the FBI's 13 explanation on line, I -- I can't speak to their 14 argument, because I don't think there is enough 15 information there. I think that it would be argued 16 other directions, if that makes sense. 17 Q Sort of. 18 A Let's just say I did not find the on-line 19 report convincing in that regard. 20 Q Okay. And you didn't find it convincing 21 because you didn't know exactly what was requested or 22 what -- you know, you think Dr. Ivins may have 23 innocently made a mistake, or -- 24 A I think that's a distinct possibility, and 25 there are other things as well, but that would get into

8 (Pages 26 to 29)

1 what I discussed with the FBI, so...

2 Q Okay. Now, so -- and again, I'm just
3 trying to make things clear and as simple as I can. If
4 I'm not accurate, just let me know and we will pin it
5 down, but -- so step number one as to whether or not
6 RMR 1029 is the source of the murder weapon, you think
7 the science is good as far as it went, but you would
8 like to have seen some additional morphs pursued to
9 lock it down even further?

10 A And I would also ask, since the observation
11 of these morphological variants is not typical in our
12 spore preps, my best guess is that they arose during
13 fermentation at Dougway. I would like to know what
14 happened to all of the rest of those fermenter preps,
15 was any of that retained, were there any morphs there;
16 was any sent to anyone else. Did anyone else who
17 obtained RMR 1029 from USAMRIID send it to other
18 individuals? I'm not convinced of any of that at this
19 point in time.

20 So I think that we can honestly say that
21 the variants found in the letters, some of them are
22 found in RMR 1029, but that's, I think, all we can say
23 at this point in time.

24 Q Have you had any discussions -- and again,
25 I don't want any conversations you had with the FBI --

1 evidence of anyone getting any training that would
2 allow them to do that.

3 Q To do what?

4 A Produce dried material of that quality.

5 Q Is that something that is complicated,
6 difficult to do?

7 A I think it would be very difficult to go,
8 given the equipment that we have, because our equipment
9 is not made for that.

10 Q So you're saying that absolutely and
11 without question, in your mind the equipment that's at
12 USAMRIID could not have been used to prepare the dried
13 spore preparations used in the letters.

14 A Not any equipment that I have seen.

15 Q And you mentioned that it was a huge amount
16 of material that was involved in the attack letters,
17 correct?

18 A (Witness nods head.)

19 Q Yes?

20 A Yes. Sorry.

21 Q The -- and is that based on visual
22 observation or what is that based on?

23 A The sheer number of spores contained in
24 those preparations.

25 Q And the number of spores is determined,

1 but have you had any discussions with Dr. Ravel about
2 his analysis?

3 A Jacques Ravel did the sequencing.

4 Q Right.

5 A I think he's a good sequencer.

6 Q And have you had discussions with him about
7 his work and what he did and how he arrived -- he and,
8 I think it's Dr. Liggett, if I recall correctly?

9 A There are a number of us on that paper.

10 Q -- how he arrived at the conclusions that
11 RMR 1029 was the source?

12 A He did not come to that conclusion.
13 Jacques Ravel did the sequencing of the ancestral M
14 strain and the variants that the FBI gave him to
15 sequence. The actual interpretation of where they
16 believe that material came from was done by the FBI,
17 not by Jacques Ravel.

18 Q All right. Now, you mentioned some other
19 things. You said that Dr. Ivins, you didn't feel, had
20 the expertise to accomplish this, and what did you mean
21 by that?

22 A For as long as I have been at USAMRIID, we
23 have exclusively used liquid spore preparations for our
24 animal challenges, and that's what we have been trained
25 to produce, and produce well. I have not seen any

1 what, by microscopic analysis?

2 A Viable counts. I think that's probably the
3 way most of these interpretations are made.

4 Q There is a lyophilizer, though, there at
5 USAMRIID, correct?

6 A In the noncontainment area.

7 Q And the lyophilizer that is mentioned in
8 the FBI's report, they indicate that it's either called
9 a lyophilizer or a speed vac, and that is something
10 that's necessary in order to dry the anthrax into a
11 powder form, correct? And that's the position they
12 take, right?

13 A I think there are other methods of drying
14 things that we don't have expertise in. A speed vac is
15 not the same thing as a lyophilizer. A lyophilizer
16 tends to process larger amount. A speed vac is a small
17 piece of equipment that would sit on the bench top that
18 you would use to dry down very small quantities of
19 things.

20 Q Which is it that USAMRIID had, a
21 lyophilizer or a speed vac?

22 A We have had both.

23 Q And you had both back in 2001?

24 A I know that we had the lyophilizer in 2001.
25 We have had speed vacs in various states of repair over

1 the years. I don't recall specifically what we had in
2 that year.

3 Q And to get back to the expertise end of it,
4 I know that's not something that you all that work
5 there customarily did, correct?

6 A Correct.

7 Q I mean, you developed spore preparations in
8 liquid media, right?

9 A Um-hmm.

10 Q And then at some point, for aerosolyzing
11 tests, it had to turn into a vapor, right?

12 A There is what they call a nebulizer, and
13 Collison nebulizer that sprays the liquid into very
14 fine particles. So it retains its liquid state.

15 Q So the aerosol tests are very small micron
16 droplets, if you will, of the liquid that you prepare,
17 right?

18 A That's generally true. They have the
19 capability of doing polydispersed aerosols as well,
20 which have multiple-sized particles, but generally we
21 do small particles, which is at a micron.

22 Q Did you ever discuss with Dr. Ivins -- and
23 again, outside the presence of any FBI folks -- did you
24 ever discuss with Dr. Ivins the process for
25 accomplishing this type of an attack?

1 A There was a great deal of speculation, and
2 there still is. I can't remember specifically
3 discussing that with Bruce, although I certainly
4 discussed it with a number of people.

5 Q Did Dr. Ivins ever, to you, attempt to
6 blame this on one of your coworkers at USAMRIID?

7 A No.

8 Q Did you read anywhere where it was said
9 that he attempted to do that?

10 MR. TARANTO: Object to form. When I say
11 "object to form," you're permitted to go ahead and
12 answer the question to the best your ability. If you
13 need to hear the question again...

14 A Okay. I'm sorry. I believe that I read
15 that on line.

16 Q Okay. Did any of your coworkers confirm
17 that he had attempted to do that to you?

18 A The only one I discussed that with directly
19 said he didn't believe it.

20 Q And which coworker was that?

21 A Hank Heini.

22 Q Now, another piece in the puzzle in the
23 FBI's case against Dr. Ivins had to do with the -- as
24 they put in their report, the suspicious lab hours he
25 kept in the months before the attacks, and specifically

1 they said that he worked at night and on the weekends
2 when no one else was around, and that this was a
3 deviation from his normal work habits that had existed
4 going back significantly.

5 Do you think that that's accurate?

6 A It's not my recollection.

7 Q What's your recollection?

8 A First of all, I think you need to
9 understand that you can't do science between nine and
10 five. Any decent scientist is going to spend a
11 significant amount of time after hours, either writing
12 or doing experiments or checking on animals, so I think
13 the idea that a scientist can operate normal 40-hour
14 work weeks is not realistic, not if they're a good
15 scientist and not if they expect to retain their
16 position.

17 We, scientists, are usually encouraged to
18 work after hours. I know that the FBI has said in
19 their report that Dr. Ivins worked more off hours
20 during that time period than in previous time periods,
21 but over the time that I knew him, he spent a
22 significant amount of time working after hours, either
23 in his office or in the lab.

24 And part of it was because he loved his
25 work and he loved the lab. And in fact, we all used to

1 love the lab. It used to be a place for camaraderie
2 and creativity, so I don't find it suspicious that he
3 had a few off hours during that time, and I don't
4 believe at the time that I have read about is
5 sufficient to have produced that material.

6 Q So there are two points you would make
7 there, number one, that just because he was working in
8 September and early October at night by himself or
9 alone on the weekends would not in and of itself be
10 unusual, right?

11 A No, I don't believe so.

12 Q And secondly, that based on the FBI's --
13 their printing of what they have discovered in terms of
14 the amount of time that he put in, in your opinion,
15 that would not be sufficient to produce the volume of
16 material?

17 A No, I don't believe that.

18 Q And again, all my questions are outside of
19 any discussions you have had with the FBI. So we have
20 that understanding, okay? But have you discussed with
21 any of your coworkers what their thoughts were as far
22 as whether Dr. Ivins was the perpetrator?

23 A It's been a major topic of conversation.

24 Q Okay. So you're aware of the fact that
25 some of your coworkers do in fact believe he was the

1 perpetrator, for example, right?

2 A It doesn't surprise me. I would say of the
3 people who actually knew him, it's less likely that
4 they would believe that. I think for the people who
5 actually knew how our lab was set up, it's less likely
6 they would believe that.

7 Q So you think that for the people the
8 closest to Dr. Ivins are probably the people that would
9 be the least convinced that he was the perpetrator.

10 A I wouldn't put it just close to him. I
11 would say closest to the working environment as well.

12 Q Okay. When you say working environment,
13 you mean actually working in the biocontainment suite?

14 A Yes. Familiarity with our procedures and
15 our equipment and our work habits.

16 Q When you do work in the biocontainment
17 suites, do you keep lab notebooks to chronical the
18 experiments and -- that you're doing there?

19 A We keep notes. Oftentimes people don't
20 keep their actual notebooks in containment, because
21 they can't ever come back out. So we when do notebook
22 inventory, it's much easier to have the notebooks
23 outside containment and then your notes inside, because
24 you can't fax out your bound laboratory notebook.

25 Q But in any event, there usually is a track

1 record of what you're working on in a notebook outside
2 the containment suite, though, correct?

3 A People keep different kinds of records.
4 It's gone more electronic in the last decade or so.

5 Q Well, I'm going back now to 2001.

6 A Well, even then it was pretty electronic.

7 Q Would you be able in 2001 to go back and,
8 say, all right, on this date, go back to your notebook
9 and say this is what I was doing at that time? Should
10 be able to do that?

11 A Yes, but it's not trivial. I had to do
12 that myself, so I know how long it took.

13 Q So it's difficult to pin it down?

14 A It can be.

15 Q All right. So I think we have covered the
16 bases. You don't believe that there is -- that there
17 were facilities at USAMRIID or -- to produce this huge
18 amount of material and that Dr. Ivins did not have the
19 expertise, right, to do it?

20 A Or the time or the motivation.

21 Q Okay. Were you aware at any time prior to
22 2001 of the psychological or psychiatric stress that
23 Dr. Ivins had been under from one time to another?
24 Before 2001.

25 A Is there something specific?

1 Q No. No, let me clarify my question. So
2 prior to 2001, were you aware of any psychological or
3 psychiatric pressures that Dr. Ivins was under or
4 suffering from prior to 2001?

5 A Oh, think we're all under some sort of
6 pressure at our jobs. I recall him saying that he was
7 undergoing counseling at some point in time, but I
8 don't recall whether that was before or after 2001.

9 Q Okay. Prior to 2001, were you ever aware,
10 of made aware by anybody at work, including Dr. Ivins,
11 that he had homicidal and suicidal thoughts?

12 A I have never heard that.

13 Q Were you ever made aware prior to 2001 that
14 he was prescribed Stelazine, which is a medication that
15 is usually taken by schizophrenics?

16 A I wouldn't have been privy to that
17 information. I'm not a medical professional.

18 Q No, I'm not asking you if you're a medical
19 professional, I'm asking you if you were ever made
20 aware through any source of these facts.

21 A Not that I recall.

22 Q Were you aware of any steps that Dr. Ivins
23 had taken to do harm to any human being?

24 A No.

25 Q Were you aware of the fact that prior to

1 2001 -- and I think you said you're aware of fact that
2 he was undergoing counseling; is that correct?

3 A At some point in time, but I don't recall
4 whether it was before or after 2001.

5 Q Okay. Were you aware before 2001 that he
6 had been prescribed antianxiety drugs?

7 A I don't recall. If he told me that, I
8 don't remember. And like I said, I would not have had
9 access to his medical records.

10 Q All right. Now, there were some issues,
11 were there not, with Dr. Ivins in November and December
12 of 2001 and then again in April of 2002 doing some
13 unauthorized cleanup, if you will, or detection of
14 anthrax spores in the laboratory; is that correct?

15 A I only heard about the November-December,
16 whatever it was, in April, but I was aware of what
17 happened in April.

18 Q Okay. And what do you recall about that
19 event?

20 A I think I started that whole event. I went
21 into the laboratory. There were two of our junior
22 scientists in my lab. They had a culture of bacillus
23 anthracis that they had been growing.

24 Q Can I stop you for with you second? When
25 you say younger scientists, what are you talking about?

1 A Young PI's.

2 Q Just started work?

3 A Younger than me. We sort of grade people
4 in terms of seniority. I wouldn't say they were brand
5 new to the laboratory, but they had been fully trained
6 and imbedded, but I thought of them as being young.

7 Q Okay. Sorry to interrupt. Go ahead.

8 A It's just my impression. They had started
9 a culture and incubated it in Dr. Welkos' incubator,
10 which was down the hall, and that they had brought it
11 to my safety cabinet to process. That was the
12 laboratory where I was already doing some work for the
13 FBI on anthrax, so I was not happy to see that the
14 culture looks like it had been leaking a little bit,
15 and there was a potential for contamination of anthrax
16 into this laboratory that I was trying to keep
17 pristine.

18 So I did swabbing in my laboratory, Dr.
19 Welkos' laboratory, the hallway, and I also looked in
20 places where historically we would sometimes find a few
21 spores, usually because someone had not changed their
22 gloves often enough. Not huge numbers of things, but
23 still, I needed to know where things were.

24 Dr. Ivins expressed some interest in the
25 situation. He historically had an interest in where

1 anthrax might be found, and he was curious as to
2 whether we might find it in the soil, since the old BW
3 program was at Fort Detrick. It didn't surprise me
4 that he was interested, because he was a busybody and
5 he liked to be in the middle of everything.

6 He subsequently decided to do some
7 culturing himself, and he actually expressed to me that
8 he was planning on doing this, and I told him he should
9 not do it without permission of the division chief.
10 But he did, anyway.

11 And he found some other places of
12 contamination, and when I talked to him subsequently,
13 he told me that one of his technicians who had been
14 assigned to Diagnostics Systems Division during the
15 time of the anthrax letters had expressed concern to
16 him about their methods of operation, and that she was
17 afraid that that laboratory that they were working in a
18 in the institute might become contaminated. And she
19 was apparently concerned enough that it worried not
20 just Bruce, but Pat Fellows, who is another technician,
21 and that was, I guess, when Bruce -- back
22 November-December time frame, I don't know which it was
23 -- decided that he would sample their office area where
24 this technician was coming back after she worked in the
25 DSD laboratory. And that he was concerned in general

1 of the practices in DSD, not because they were not
2 competent, but because none of us had ever seen
3 anything like this before. None of us had seen
4 powdered anthrax, none of us knew how to work with
5 powdered anthrax. It was a learning experience for
6 everyone, and I think he was concerned that we needed
7 to be exceedingly cautious in how we handled it,
8 especially since it was initially handled in BLS 2,
9 like more forensic samples. They were all brought in
10 that way.

11 Q Was his lab technician, was Christie
12 Friend?

13 A Yes.

14 Q And she shared an office space with him?

15 A And with Pat Fellows, too.

16 Q And it was on her desk, I think, that he
17 found the residue of some anthrax?

18 A I remember he told me he found not it in
19 that office. I don't recall exactly where it was.

20 Q Let me show you what's been Bates-stamped
21 USAM 261 through 264, and ask you, Dr. Worsham, whether
22 that appears to be a summary statement of the incident
23 that we have just been discussing.

24 A Am I supposed to just be reading the yellow
25 part?

1 Q No, no, you can read -- just glance through
2 the whole thing. You just want to ask if that appears
3 to be a statement related to the incident that we have
4 just discussed.

5 A Was there something specific?

6 Q No, my question to you is, does that
7 summarize what we have just discussed as the incident
8 of April, 2002.

9 A I believe so.

10 MR. SCHULER: We will have this marked as
11 Plaintiff's 255.

12 (Deposition Exhibit 255 was marked for
13 purposes of identification.)

14 Q Let me show you this document. Forgive me
15 for not separating it from the rest of this. It's all
16 stapled together, but I'm specifically referring to
17 Army 5574 to 5575, and it's two pages out of a document
18 that starts at Army 5569 through Army 5583.

19 Does that appear to be at least a short
20 summary of a statement that was taken of you at one
21 time?

22 A So again, I'm just going...

23 Q Just the two pages.

24 A Just these two pages?

25 Q Yes, just where your name starts. Where

Page 46 1 your name starts. 2 A Oh, where my name starts. Okay. 3 MR. TARANTO: Mr. Schuler, before you go on 4 with the questioning, I would like to look at the 5 document after Dr. Worsham reads it. 6 MR. SCHULER: Certainly. 7 THE WITNESS: (Proffers document to Mr. 8 Taranto.) 9 Q My question to you is, does that appear to 10 be an accurate representation of a statement that you 11 gave at one time? 12 A I can't say it looks familiar, but -- 13 Q You have never seen it before? 14 A I don't know that I have ever seen this, 15 no, unless it's on line somewhere. 16 Q Okay. 17 A But I may not -- 18 Q Does that appear to be accurate, though? 19 A So far as I recall. I don't know -- it 20 says he's a member of a work social organization. The 21 only thing I can think of is that might mean the 22 American Society for Microbiology. 23 Q All right. 24 A So it looks like this was 2003? 25 Q Correct. We will mark that as Plaintiff's	Page 48 1 Q I was going to get into the specifics. 2 A Okay. 3 Q So my basic question was, have there been 4 changes in security since 2001, and you were going to 5 say yes and then I was going to ask you what those 6 changes were. 7 A Okay. 8 Q So you already anticipated a couple of 9 steps down the road. So cameras have been added, 10 right? 11 A Um-hmm. 12 Q Fingerprint reader? 13 A Yes. 14 Q Is there a buddy system now for the 15 biocontainment labs? 16 A No, there is not. 17 Q What other changes in security have been 18 effected? 19 A Those are the two most significant I can 20 think of. 21 Q The cameras and the fingerprint reader? 22 A Um-hmm. 23 Q Yes? 24 A Yes. 25 Q The -- what about entrance and exit, has
Page 47 1 256. 2 (Deposition Exhibit 256 was marked for 3 purposes of identification.) 4 MR. TARANTO: Just for clarification, 5 counsel, is it just those two pages, or the whole 6 range? 7 MR. SCHULER: Just the two pages. I will 8 have it segregated later. 9 Q Now, at the time that the spill was 10 detected, I'll call it, in April of 2002, were you the 11 assistant division chief then? 12 A 2002. I believe, if that was 2002, I was 13 probably a department chief. Because I was assistant 14 division chief when Russ Byrne was division chief. 15 When Jerry became division chief, I think Jeff Amavich 16 was the deputy, if I recall correctly. But it's hard 17 to keep track of. 18 Q Now, have there been changes in lab 19 procedures and security since 2001? 20 A There have been changes in security. There 21 are cameras in the hallways, there is a fingerprint 22 reader, there are changes in -- what was the second 23 question? 24 Q That was my question. 25 A The security? Okay.	Page 49 1 there been anything changed there? 2 A Rather recently there is more of an active 3 process of determining who is in containment at any 4 given time. I think that's more for safety purpose so 5 that we know who is in the building if there is an 6 emergency. 7 Q What about at the entrance and exitways to 8 the building, though, is what I'm getting at. Has 9 there been anything changed there? 10 A There is the guard shack, there is a shack 11 now where the guard sits where we come in, and everyone 12 comes in through that one entrance. 13 Q Any change in the method of entry? In 14 other words, do you have to -- is it still a card 15 system or is there something else that you have to show 16 to get in? 17 A Into what area? 18 Q Into the building itself, 1425. 19 A The card reader and when you walk through 20 the guard area. 21 Q Is there any type of scanning, whether its, 22 you know, x-ray scanning or anything like that? 23 A They x-ray our packages. 24 Q So that's been added; that wasn't done 25 before, right?

1 A We do have x-ray in the building proper,
2 but I don't remember when that showed up.
3 Q What showed up, the x-ray of the packaging?
4 A Yes. Because there was a period where they
5 were x-raying within 1425, for example, but I don't
6 remember when that started.
7 Q Okay. What about looking in packages,
8 either on entrance or exit?
9 A They certainly have done that in the last
10 several years. I don't recall exactly when that began.
11 Q Okay. So cameras, fingerprint reader,
12 x-raying packages, examining packages. Anything else
13 as far as physical security is concerned?
14 A The fence around the property.
15 Q Anything else?
16 A That's all that comes to mind right now.
17 Q What about -- and we have heard discussion
18 in other depositions about the PSP, Personal Security
19 Program.
20 A PRP, Personal Reliability Program?
21 Q Personal Reliability Program, sorry. PRP.
22 I'll get my acronyms straight here.
23 A The Army has a lot of them.
24 Q They do. What has changed as far as that's
25 concerned?

1 A There was always a component in SIP where
2 they monitored physical and mental health. So that
3 always existed. When I came to USAMRIID, there was a
4 requirement that we have secret clearances, so there
5 were investigations on that level. And there were
6 always a certain level of background investigations
7 that they did on everyone, I believe. Precisely what
8 those were at that time, you would have to talk to
9 someone else, but there were investigations. Now
10 everyone undergoes an SSBI.
11 Q SSBI is what?
12 A Single Scope Background Investigation.
13 Q How is that different from the prior
14 investigation?
15 A They spend more time wandering your
16 neighborhood looking for dirt, asking what you do in
17 your spare time, asking if you have any wild parties.
18 It's -- there is a lot of referrals, so, "Do you know
19 someone who knows this person; do you know someone who
20 knows this person," that sort of thing.
21 Q And who has been conducting -- if you know,
22 who conducts those investigations?
23 A They appear to be contractors from the U.S.
24 Government, for OPM.
25 Q Okay. So you said you always had the

1 mental and physical from the SIP, but now they have
2 added this SSBI investigation level.
3 A Correct.
4 Q Anything about else as far as Personal
5 Reliability Program is concerned?
6 A The medical evaluations are far more
7 onerous. There is a lot of reporting every tiny
8 detail.
9 Q Self-reporting still, or reporting in
10 general?
11 A Both.
12 Q And when you say reporting, you're talking
13 about as far as someone else's health is concerned,
14 things you might notice, or mental or emotional state,
15 that kind of thing?
16 A I think all of that is part of it.
17 Q Are there actual forms to do this now,
18 or...
19 A I don't know that there are forms per se,
20 but I think that concerns have always been expressed.
21 This formalizes that concern process, so there is a
22 certifying official who takes in the information from
23 security, from SIP, from supervisors, from the
24 individual themselves, from co-workers, and makes
25 decisions regarding that person's suitability at that

1 particular point in time. So it's a more formalized
2 process.
3 Q Got you. Is there a facet of anonymity to
4 reporting? In other words, if you were concerned about
5 a coworker after the institution of the PRP program and
6 you were going to report something, would you be held
7 in anonymous -- as a anonymous reporter, rather than
8 have your name used?
9 A I assume so. I have not had that
10 experience; I don't know.
11 Q Anything else as far as the Personal
12 Reliability Program is concerned, changes since 2001?
13 A I think it's so stringent that it makes it
14 difficult. I, for example, have reported taking a
15 Benadryl over the weekend when I have a cold. I report
16 everything. It's -- it becomes a mentality where I
17 think people don't feel trusted to make intelligent
18 decisions. But that's my personal opinion.
19 Q Well, I was asking a factual question and
20 you were giving me your opinion, okay?
21 A Okay.
22 Q My factual question was, were there any
23 other changes to the Personal Reliability -- in the
24 Personal Reliability Program after 2001?
25 A Not that I can think of right this minute.

Page 54 1 Q What about urine testing for drugs or 2 alcohol? 3 A Yes, they did recently start that. 4 Q So that is something that's different, 5 right? 6 A Yes. 7 Q Yes? Do they test blood now for drugs? 8 A No, I think that's invasive. That might be 9 a little bit more difficult legally. 10 Q Well, you still have to give the blood for 11 titers and things in the SIP program, right? 12 A Sometimes titers are not necessary. 13 Q Do you have to give blood at all to the SIP 14 folks who are the -- what's the -- we were talking 15 about it before -- I'll find it here in a second. The 16 Barquist folks. Do you have to give blood at all to 17 those folks? 18 A Not to Barquist. We do have annual blood 19 work for SIP once a year. 20 Q Okay. And that was my question. Are they 21 now testing that for drugs or alcohol? 22 A Not that I'm aware of. 23 Q Anything else that's associated with the 24 PRP program since 2001, or have we pretty much covered 25 all the facets of it?	Page 56 1 Q Do you know who was charged with the 2 responsibility for observation of what the monitors 3 show from the cameras? 4 A I don't know who does it on an everyday 5 basis. I have been called in on occasion to look at 6 things in my suites. 7 Q Is there a recording that's done as well? 8 Does it back up, for example for 24 hours? 9 A I don't know what backup times are. 10 Q Is there a backup? Is it recorded, do you 11 know. 12 A It's recorded up to some point, but I don't 13 know how they keep the recordings or I don't know the 14 details of that. 15 Q Let me show you Army 2516, 2517 and 2518. 16 And ask you to take a look at that for a second. And 17 do you recognize that? 18 A The first set of pages is a memo that 19 Colonel Purcell and I wrote and that I signed, and the 20 second is a memo from the commander. 21 Q And what does that concern? 22 A This concerned an incident in suite B5, 23 which is the BLS 2 area, in 2008. 24 Q And this involved Dr. Ivins in that 25 incident?
Page 55 1 A I think. 2 Q We have covered it? Yes? 3 A As far as I can recall right now. 4 Q Okay. You mentioned that there wasn't a 5 buddy system in the biocontainment labs. Did somebody 6 suggest that sometime and it just wasn't pursued, or... 7 A That was suggested after 2001, I believe by 8 the DAIG, who was more acquainted with nuclear surety. 9 Q Okay. And what was the culmination of 10 that? What happened with that suggestion? It just 11 wasn't followed for one reason or another? 12 A It was extremely onerous. It was almost 13 impossible to get any work done. The scheduling to get 14 two people in the same place at the same time for the 15 same hours was detrimental to our mission, and to 16 morale, so eventually it went to a roaming observer 17 force. These were enlisted people who went through the 18 areas randomly and without notification to inspect what 19 was going on, and then cameras. So I believe the 20 cameras were meant to be placed throughout the 21 building. 22 Q And the cameras were in the biocontainment 23 suites and the monitors were somewhere in the building, 24 someone observed? 25 A Correct.	Page 57 1 A Yes, it did. 2 Q And did the incident ultimately end in 3 restricting his privileges to go into the 4 biocontainment suites? 5 A I wouldn't say the accident per se. I 6 would say that it was his -- the despair and depression 7 at that time that led him not to think as clearly as he 8 normally would have. 9 Q And did that have to do, if you know, with 10 the investigation, his being investigated by the FBI, 11 or something else? 12 A I have no doubt that it did. 13 Q Okay. Did he tell you that himself? 14 A Yes. 15 Q Okay. 16 A More than once. 17 Q All right. Let's go ahead and have that 18 marked as Plaintiff's 257. 19 (Deposition Exhibit 257 was marked for 20 purposes of identification.) 21 Q Did -- and this, for lack of a better word, 22 I'll call it sort of deteriorating emotional or mental 23 condition at that time of Dr. Ivins that resulted in 24 his being excluded from the biocontainment suite -- 25 A This, he was out of biocontainment before

15 (Pages 54 to 57)

Page 58 1 this. 2 Q Oh, he was out of the containment before 3 this? 4 A Yes. He was out of containment after the 5 incident with the FBI in November of 2007. This was 6 March of 2008. This was an incident with a vaccine 7 strain back in BLS 2. 8 Q So that's a BLS 2 event. 9 A Correct. 10 Q And he had already been excluded from the 11 biocontainment suites in 2007. 12 A Yes. 13 Q And was that also connected to a 14 deteriorating mental and emotional condition back then? 15 A It stems specifically from the November 16 incident when the FBI came in and turned our 17 laboratories and his office upside down, segregated him 18 from his family, and it was a very traumatic experience 19 for him and I don't think he ever recovered. 20 Q Now, I know that you were very close to Dr. 21 Ivins, obviously, correct? 22 A I was not the closest person to him, but I 23 worked with him for a number of years and I had respect 24 for him. 25 Q Did you -- were you ever -- this is going	Page 60 1 Q Was he a person who did not like to be 2 criticized? 3 A I can't say he was any worse than any of 4 the rest of us, necessarily. I don't really think of 5 that as being a predominant part of his personality. 6 Q Would you consider him to be a sensitive 7 person? 8 A He was very sensitive to the feelings of 9 other people. He was concerned about their lives and 10 their well-being. 11 Q Did he ever indicate to you in any context 12 any feelings that he had of anger or revenge or 13 anything like that toward anyone else? 14 A Toward the two thousand -- late 2007, early 15 2008 time frame, he was very angry with the FBI. And 16 especially angry at the way he perceived that they 17 treated his family. 18 I don't recall whether he made any specific 19 threats, but he was angry. 20 Q Did -- were you aware prior to 2001 as to 21 whether or not he had any type of obsession with any of 22 his female co-workers? 23 A I don't think obsession is a word I would 24 use. He was very close to Pat Fellows; she was his 25 right hand. He had mentored her, he had taught her a
Page 59 1 to sound like a stupid question, and it probably is, 2 but you would have received emails from Dr. Ivins over 3 the years, correct? 4 A I received some emails from him over the 5 years, yes. 6 Q And mostly related to work? 7 A He liked to send jokes out, too. 8 Q Okay. The occasional joke? 9 A Too many sometimes. 10 Q All right. Did you ever receive the type 11 of personal emails that he may have sent to other 12 workers where he talked about his psychological state 13 or emotional state? 14 A No, I didn't. 15 Q Were you aware at some point that he had 16 sent such emails out, either from reading what was 17 available on the internet or from the newspaper? 18 A Internet or newspaper, one or the other, 19 yes. 20 Q Was that surprising to you, to see the 21 content of some of those emails that were public? 22 A Yes and no. Bruce was very dramatic. He 23 liked to be the center of attention, he liked to get 24 attention, and I do wonder how much of that drama was 25 due to the fact that he was trying to elicit attention.	Page 61 1 great deal. I think he was very proud of her and her 2 achievements. Mara Scott, I think similarly. Mara was 3 extremely bright; she was a friend of his family, so 4 they knew each other before she came to work in the 5 lab. I think he may have -- we used to joke that he 6 might have a little crush on her sometimes, but 7 obsession is not a word I would use. 8 Q All right. So Ms. Fellows and Ms. 9 Lindscott are -- were two of the people that he was 10 closest to. 11 A Um-hmm. 12 Q Would that be a better way to put it? 13 A And Anthony Bassett in his laboratory, 14 probably. 15 Q Anthony Bassett? 16 A Um-hmm. 17 Q Who is Anthony Bassett? 18 A One of his technicians who probably was not 19 working for him at this time. He worked for him later. 20 Q When would he worked with Dr. Ivins, 21 approximately? 22 A He was working with him at the time of his 23 death. 24 Q Okay. So in the 28-2009 time period? 25 A Well, he died in 2008.

16 (Pages 58 to 61)

1 Q Excuse me.

2 A I don't recall exactly when he started to
3 work for Bruce. It would have been after Mara left,
4 most likely, but I can't remember exactly when.

5 Q Now, at some point, did you become sort of
6 Dr. Ivins' boss as far as the hierarchy is concerned?

7 A I was never his direct rater. I was his
8 senior rater beginning in 2008.

9 Q 2008? Okay. Let me show you Army 4767 and
10 4768 and 4769. Actually, it's got a cover page to it,
11 4766 is the cover page, and I ask you if that's a
12 statement you give at some point regarding Dr. Ivins.
13 Does that appear to be a statement that you gave at
14 some point?

15 A It's looks familiar.

16 MR. SCHULER: Let's go ahead and have that
17 marked as Plaintiff's 258.

18 (Deposition Exhibit 258 was marked for
19 purposes of identification.)

20 Q Does that appear to be a fairly accurate
21 recounting of your statement given -- I don't have it
22 in front of me, so I'm not sure what the date is on
23 this that.

24 A I think I was probably more verbal than
25 this, but this is probably boiled down.

1 Q But it seems to be accurate.

2 A Yes.

3 Q Do you remember when the -- and you
4 referred to it a few minutes back -- did you remember
5 what the AIG came in for their inspection?

6 A It was probably in the winter of 2001, I'm
7 guessing.

8 Q Were you there in any meeting with the AIG
9 people or did they speak with you or --

10 A I don't remember meeting with them
11 directly. Not for that inspection.

12 Q So you were not directly involved with
13 them, in other words, for that inspection.

14 A Not that I recall.

15 Q What about the Sandia National Laboratory,
16 were you there when -- I think that was in May of --
17 late April, May of 2002, when they came in?

18 A I recall that there was some sort of a
19 security investigation, but I wasn't privy to the
20 details.

21 Q You didn't speak with any of their people?

22 A Not that I remember, but I was interviewed
23 by a lot of people during this time.

24 Q Dr. Andrews was -- he was head of the
25 Division of Bacteriology at one point, correct?

1 A Yes, he was.

2 Q And then I think it was Dr. Byrne before
3 him; is that right?

4 A Yes, I believe so.

5 Q Did Dr. Ivins ever express to you a concern
6 that the anthrax program in the summer or early fall of
7 2001 might be coming to an end because of some problems
8 about the testing of the vaccine?

9 A I have seen some references to that in the
10 FBI report, and I think that angle of it is overblown.
11 I think that we were under considerable pressure by the
12 Army to assist BioPort in making sure that they could
13 produce an appropriate vaccine. So I think that there
14 was certainly pressure to assist them, but I don't
15 think any of us felt like the program was in eminent
16 danger.

17 Things cycle in terms of how they're
18 funded, so anthrax was up when I came in '89, it went
19 down again, it had a revival, it went down again. I
20 think those sorts of things are anticipated. So I
21 don't really believe he could have thought it was in
22 danger of being shut down.

23 Q And he never expressed any thoughts like
24 that to you?

25 A I don't recall that, specifically. I know

1 he was somewhat irritated at having to go to BioPort
2 and assist them. That, I do recall.

3 Q But did he ever say to you that he had a
4 concern that if the testing was not satisfactory, that
5 there might be -- you might run out of vaccine or
6 something like that?

7 A I think that that might have been a
8 concern. I recall when I first came to USAMRIID there
9 was an issue with indemnity of the vaccine, and that
10 kept all of us, especially those of us who were new,
11 out of containment for a while until they resolved that
12 issue. So from a purely personal standpoint I could
13 see why someone might be concerned that the licensed
14 vaccine might not be able, either to us as scientists
15 or to the soldiers.

16 Q And if the licensed vaccine was not
17 available, would that then cause problems with
18 continuing research on anthrax because of not being
19 able to be protected, the scientists not being able to
20 be protected?

21 A It would mean new personnel would have to
22 undergo more protective measures, because they had not
23 been immunized.

24 Q In other words, more external protection?

25 A That probably -- that would have been my

1 decision to make, but...

2 Q Did you ever go with Dr. Ivins to any of

3 BioPort or Battelle, their laboratories?

4 A No. I have been to Battelle, but I did not

5 go with him.

6 Q Did you go to Battelle in connection with

7 anthrax, or something else?

8 A Something else.

9 Q In terms of socialization, outside of work,

10 how frequently would you see Dr. Ivins on a social

11 basis?

12 A We often went to lunch with groups in

13 bacteriology. There were parties during the year. My

14 husband and I have a summer party and a holiday party.

15 Bruce always came to that. Someone else would have a

16 halloween party, and various functions through the year

17 for weddings, birthdays, that kind of thing.

18 Q So you have been to his house, he has been

19 to yours.

20 A Yes, um-hmm.

21 Q And somewhat frequent out-of-the-office

22 contact through socialization, office socialization?

23 A Bruce liked to socialize with people in the

24 office. I didn't socialize as much with him as some

25 other people, because he was active with the softball

1 team and the bowling group and that kind of thing, and

2 I was not involved with that.

3 Q I think we have talked to some folks who

4 went to the same church as Dr. Ivins. Are you an

5 attendee at that church?

6 A No, I'm not.

7 MR. SCHULER: Why don't we take a short

8 break here. We have been going for a couple of hours.

9 THE VIDEOGRAPHER: Off the record at 2:09.

10 (Brief recess.)

11 THE VIDEOGRAPHER: We're back on the record

12 at 2:23, beginning tape two.

13 Q Dr. Worsham, I just have a few more

14 questions for you.

15 Let me show you -- this is an article that

16 I have from the Frederick News Post, talks about the

17 panel continues to study anthrax mailings, and it

18 refers to the National Academy of Sciences. Let me

19 show you this. This is just something I got, so there

20 aren't any Bates numbers on it.

21 The reason I showed it to you -- and if you

22 will just hand it back to me for a second, I'll have

23 that marked as Plaintiff's 259.

24 (Deposition Exhibit 259 was marked for

25 purposes of identification.)

1 Q The reason I showed it to you, your name

2 came up in a presentation that apparently you made, but

3 it also refers in here to Paul Keim, and mentions a

4 couple of quotes from him. Do you know Dr. Keim?

5 A Yes, I do.

6 Q And in this article, Dr. Keim said that he

7 was positive about the match between the anthrax

8 collected from letters and the flask under Ivins'

9 control. Do you know if that's still his position?

10 MR. TARANTO: I'll object to the form of

11 the question and necessarily assumes -- and also the

12 presumption that whatever is reported in the newspaper

13 is not necessarily an accurate quote.

14 Q You can go ahead.

15 A All right. I think that statement was

16 taken somewhat out of context. I would say that Dr.

17 Keim, at least in the past, has been more positive

18 about that finding than I have been, but I have not

19 discussed it with him lately.

20 Q Okay. Do you think that there has been a

21 change in the culture of USAMRIID scientists as far as

22 biosecurity is concerned since, let's say, 2001, 2002?

23 A What specific aspect of biosecurity are you

24 talking about?

25 Q I'm talking about the Personal Reliability

1 Program and the physical security changes that we

2 discussed earlier.

3 A Are you asking if I feel more secure?

4 Q Yes. And I asked the question about not

5 you in particular, but from your knowledge of you and

6 the other scientists at USAMRIID. Do they feel more

7 accepting of the changes and appreciate the need for

8 biosecurity now more?

9 A I wouldn't presume to say that.

10 Q What would you presume to say?

11 A I would say that there is a -- maybe I

12 shouldn't say a general feeling; maybe I should stick

13 to my own feelings, that's probably the safest thing to

14 do -- that maybe of these changes would not stop

15 someone from conducting such an act.

16 You can acquire bacillus anthracis from the

17 soil; you don't need to get it from a laboratory. I

18 think that your best protection against this kind of

19 incident is a well-educated work force with good morale

20 and a lot of personal interaction so that everyone sees

21 what everyone else is doing in a positive way, and I

22 think people need to feel like they are trusted to a

23 certain extent.

24 Q What about personal integrity, does that

25 enter into it?

Page 70

1 A I never felt that we lacked personal
2 integrity.
3 Q But you would acknowledge that that's
4 pretty important in a situation like this; isn't that
5 correct?
6 A I think it's important in every situation.
7 Q When you're handling organisms that are
8 extremely lethal, some of the most dangerous pathogens
9 known to mankind, isn't there a greater responsibility
10 for the individual to have a high degree of integrity
11 and reliability?
12 MR. TARANTO: Object to form. If you're
13 able to answer.
14 A I may not answer the question correctly,
15 because I'm not exactly sure what he's asking, but I
16 think everything that you have control of in your life
17 that could be lethal, you have to have that kind of
18 integrity, whether it's driving an automobile, whether
19 it's handling pathogens. I think that sense of
20 responsibility comes from within, and I'm not sure that
21 this Personal Reliability Program has made anyone have
22 greater integrity than they already had.
23 Q You don't see any difference between
24 working and handling these type of pathogens and
25 driving an automobile?

Page 71

1 A Obviously there is a difference there, but
2 I think they both involve a tremendous level of
3 responsibility.
4 Q And the level of responsibility in terms of
5 working in this laboratory is really the last line of
6 defense, isn't it, personal responsibility, personal
7 integrity?
8 A The last line of defense?
9 Q Yes.
10 A I would think it would be the first line of
11 defense.
12 Q Okay, first line of defense. Because from
13 what you told me, the security measures really don't
14 count, because anybody that wanted to do something like
15 that, that had a mind to do it, could do it, right?
16 A I wouldn't make it sound easy, but it's
17 theoretically possible.
18 Q Okay. Possible. Not probable.
19 A I'm not going to split hairs.
20 Q All right. Have you discussed or had
21 meeting at USAMRIID about changing the culture of
22 USAMRIID scientists with respect to biosecurity?
23 A Specifically -- when you say change of
24 culture, I'm not sure exactly what you're referring to.
25 Q That, you know, maybe it's time to adopt

Page 72

1 certain measures of biosecurity to make things tighter,
2 to make things more stable, and to protect the public
3 and other people around this community.
4 A My personal opinion is that those measures
5 probably don't do what people think they do.
6 Q So you have never had any meetings with
7 regard to talking about changing the culture about
8 security at USAMRIID?
9 A There have been many discussions about
10 changing culture. That's a popular term. But unless
11 you tell me specifically what you mean by changing
12 culture. Are you talking about inventory, are you
13 talking about fingerprints? I mean, there is a
14 different answer to each one of those things.
15 Q Okay. Let's talk about fingerprints.
16 What's the answer for that?
17 A It might provide some increased measure of
18 security to the containment areas. I haven't felt like
19 that was a real damage to our mission or our morale, so
20 I think that that was okay. I'm not sure it does a
21 whole lot, but...
22 Q What about inventory?
23 A Biological agents are not like nuclear or
24 chemical agents. They multiply. So inventory in the
25 sense of I have a hundred vials today, I could have a

Page 73

1 hundred more tomorrow. Counting vials, I don't
2 believe, is a solution. I do it, because I'm told to
3 do it and that is the rule. And I follow the rules.
4 But I will tell you it has cut into our mission, it has
5 affected morale, and it takes up a tremendous amount of
6 our time that we could be investing in products for
7 soldiers.
8 Q So it has affected morale, do you think,
9 instituting an inventory control system?
10 A And not in a good way.
11 Q When was the inventory control system
12 instituted?
13 A It's been evolving over time. I think you
14 have to differentiate between what we have, which are
15 not the reference stocks, and reference stocks, so we
16 first started to keep inventory of our materials, I
17 believe, in the 2002 time frame. But the process has
18 evolved and become more and more economics.
19 Q And what -- what type of system is in
20 effect now that -- what are the facets of the system
21 that you deem to be onerous?
22 A We have to maintain a cradle-to-grave
23 accounting for materials, which is not always
24 practical. It's a lot of paperwork, it's a lot of
25 time, and in some cases it forces people to terminate

Page 74 1 experiments just because it's become too difficult to 2 maintain that kind of documentation. 3 Q And who is in charge, ultimately, of the 4 documentation? Is it the individual scientists? 5 A Yes. We have a lot of assistance from the 6 biosurety office in terms of how they want things done, 7 but in the end, it's the responsibility of the PI. 8 Q Is there any change now under way to alter 9 that -- the current system? 10 A I believe that the report put out 2009, I 11 believe it was, indicated that the scientific community 12 that discussed that, among other issues, felt that 13 inventory was not really the answer. But that has not 14 changed what we do. 15 Q When you say the report that is coming out 16 in 2009, what report? 17 A I don't recall the name of it, but it was a 18 very select group of scientists. 19 Q Was this the ASM, American Society of 20 Microbiology group put together? 21 A It probably was ASM-supported. 22 Q Are you saying the ASM, assuming that was 23 the group that was aligned with this panel that was put 24 together, they are wanting now to dispense with the 25 type of inventory controls that you're using now at	Page 76 1 about? 2 A I think I'll just wait until you ask me. 3 MR. SCHULER: Fine. Not further questions. 4 MR. TARANTO: We just need a couple of 5 minutes. 6 THE VIDEOGRAPHER: We're off the record at 7 2:38. 8 (Brief recess.) 9 THE VIDEOGRAPHER: We're back on the record 10 at 2:45. 11 EXAMINATION BY MR. TARANTO: 12 Q Dr. Worsham, I just wanted to follow up 13 with you on your testimony at one point that was 14 elicited by Mr. Schuler. 15 I think you testified on the subject of 16 inventorying that biological agents are not like 17 nuclear materials, that there is a process for counting 18 vials which you do, and that the counting of vials for 19 inventorying has cut into the mission and the morale, 20 and not in a good way. I want to first of all ask you 21 about that. 22 How has it cut into mission and morale, the 23 counting of the vials, the cradle-to-grave, as you used 24 it? 25 A Okay. In terms of mission, whatever time
Page 75 1 USAMRIID? 2 A The ASM is a very diverse group of 3 scientists. I don't think anyone can presume to speak 4 for the whole institution. 5 Q No, I'm say this group that they put 6 together, was there is a recommendation that you 7 dispense with the type of controls you're using now? 8 A I don't know that they were specific as to 9 what should be done, but they recognized the issues 10 involved with it, but they are not the ones who control 11 the requirement for inventory. That actually stems 12 from CDC. 13 Q So that what you're doing now is a 14 requirement that comes from CDC? 15 A And Department of the Army. 16 Q And these are regulations that were 17 instituted relatively recently, in the last few years? 18 A Yes. 19 Q Do you know the regulation numbers off the 20 top of your head? 21 A Well, the Army regulation -- well, I'm 22 trying to think of 50-1. That's PRP, I believe. I 23 don't keep numbers in my head like that. 24 Q All right. Is there anything that you want 25 to say about this matter that I haven't asked you	Page 77 1 is taken away from our time to conduct science, that's 2 detrimental to the mission. So we have less time to do 3 science than we have ever had. We spend more and more 4 time on accountability. 5 And in terms of morale, I think that all of 6 us recognize as scientists that if you take a single 7 vial, you can grow up hundreds of vials by the next 8 day, because these are replicating agents. They 9 self-replicate. 10 Unlike nuclear material, where if there is 11 200 microliters in the vial when you start, you expect 12 200 microliters to be there the next day, barring 13 evaporation. 14 It's totally different with biologicals 15 that replicate exponentially. So you can start 16 literally with one one day and have billions the next. 17 So I think, scientifically, we recognize 18 that it's not the same thing as nuclear or chemical 19 surety, and the implication that we are not honest 20 people, that we are not trustworthy people, and the 21 fact that we are in such terror of making a wrong count 22 that will bring in the law and everything else upon our 23 head. Everyone may -- counting thousands of vials 24 might make a mistake. But there is no room for a 25 single mistake. Not one.

20 (Pages 74 to 77)

Page 78 1 Q In terms of impact on productivity and 2 impact on the mission, how much of an impact or how 3 much of a time factor is involved with this type of 4 material accountability, would you say? 5 A I would say it's probably taking up twenty, 6 thirty percent of our lab time, because we -- for 7 example, I have an experiment going on this week. We 8 had to prepare numerous documents for chain of custody. 9 And there -- it's very involved, things going back and 10 forth between the buildings; we had to pull people away 11 from their experiments to serve as monitors in the 12 process, and we're having to account for the material 13 as it goes to the other building for a spray, what 14 comes back to us in AGI's, we have to account for the 15 animals, the tissues from the animals, the blood from 16 the animals, the cultures from the animals. 17 It's a very long and tedious process, not 18 only to document it as you would scientifically, but to 19 document it in such a way that it's acceptable for the 20 inventory process. 21 Q Does this material accountability process 22 or procedures for counting of vials, does it prevent 23 theft of biological material by persons with access to 24 it? 25 MR. SCHULER: Object to the form.	Page 80 1 of that on these plates and then the rest of it went 2 into tubes and then it went into the autoclave and the 3 plates went here and the plates went there, it gets be 4 very difficult to try and keep it all documented 5 properly, when in reality, I think that we should have 6 a little bit more trust in our workers. 7 Q Now, the inventory requirements that you 8 work under, do they require quantification of 9 materials? 10 A They require that we can tell them how many 11 vials we have. 12 Q But not how much is in each vial and how 13 much is taken from a vial? 14 A That would also be hard to be accurate 15 with, because if you have a frozen vial -- and our 16 stocks are frozen -- if you thaw the material to remove 17 some, then you're destroying the material, because 18 every time you freeze and thaw it, you are making it 19 less viable. You're destroying that stock. 20 So with a frozen stock, we take inoculating 21 loops and we scrape off frozen material. The amount 22 that we obtain varies each time, because it's not a 23 quantitative procedure. 24 MR. TARANTO: All right. Thank you, Dr. 25 Worsham. We have nothing further.
Page 79 1 A I think that if anyone wanted to take 2 material, as I said, they could get it from outside of 3 USAMRIID. They wouldn't even have to get it from a 4 laboratory. They could get it from the soil in the 5 case of anthrax or they would get it from a prairie dog 6 hole in the case of plague. And some people have done 7 that. 8 If you wanted to get some from a lab, 9 someone might not take a vial. They might take some 10 tiny amount and get that amount out without the vial 11 being missing. 12 I think with the kind of people that we 13 have working with us, that's not going to happen, but I 14 think it's naive to believe that counting vials and 15 counting plates and counting animal tissues is really 16 protecting the public. 17 Q Would it be more difficult to, instead of 18 just counting vials, to keep a count or an accounting 19 of the materials that's in the vials? Quantification 20 of materials, so to speak? 21 A I think you could quantitate to a certain 22 extent what you grew up from that stock, for example, 23 if that's the question. You can say I started with a 24 200 milliliter culture. But when it gets to the point 25 that you're having to say "And I plated 300 microliters	Page 81 1 MR. SCHULER: I don't have anything 2 further. 3 MR. TARANTO: All right, thank you. After 4 -- the deposition, Dr. Worsham, will be transcribed and 5 you will be given an opportunity to read it, make 6 corrections if required on a separate errata sheet 7 where you note the page and the line, and there is a 8 period whereby you're allowed thirty days within which 9 to make corrections and to submit a signed deposition. 10 So if you don't sign it then, it exists in final form 11 as to the way it's transcribed. And so would you be 12 willing to review your transcript? 13 THE WITNESS: Sure. 14 MR. TARANTO: All right. Thank you. 15 THE VIDEOGRAPHER: We're off the record at 16 2:52. 17 (Deposition concluded at 2:52 p.m.) 18 19 20 21 22 23 24 25

21 (Pages 78 to 81)

CERTIFICATE OF DEPONENT

I hereby certify that I have read and examined the foregoing transcript, and the same is a true and accurate record of the testimony given by me.

Any additions or corrections that I feel are necessary, I will attach on a separate sheet of paper to the original transcript.

PATRICIA L. WORSHAM, Ph.D.

State of Maryland
County of Howard, to wit:
I, George W. Tudor, a Notary Public of the State of Maryland, County of Howard, do hereby certify that the within-named witness personally appeared before me at the time and place herein set out, and after having been duly sworn by me, according to law, was examined by counsel.

I further certify that the examination was recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand and notarial seal this 18th day of February, 2011.

George W. Tudor
Notary Public

My Commission Expires:
March 1, 2011