Tuesday, May 27, 1997 (afternoon)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Criminal Action No. 96-CR-68

UNITED STATES OF AMERICA,
Plaintiff,

vs.

TIMOTHY JAMES McVEIGH,
Defendant.

REPORTER'S TRANSCRIPT
(Trial to Jury - Volume 117)

Proceedings before the HONORABLE RICHARD P. MATSCH, Judge, United States District Court for the District of Colorado, commencing at 1:30 p.m., on the 27th day of May, 1997, in Courtroom C-204, United States Courthouse, Denver, Colorado.

Proceeding Recorded by Mechanical Stenography, Transcription Produced via Computer by Paul Zuckerman, 1929 Stout Street, P.O. Box 3563, Denver, Colorado, 80294, (303) 629-9285

APPEARANCES

PATRICK M. RYAN, United States Attorney for the Western District of Oklahoma, 210 West Park Avenue, Suite 400, Oklahoma City, Oklahoma, 73102, appearing for the plaintiff.

JOSEPH H. HARTZLER, BETH WILKINSON, SCOTT MENDELOFF, JAMIE ORENSTEIN, AITAN GOELMAN, and VICKI BEHENNA, Special Attorneys to the U.S. Attorney General, 1961 Stout Street, Suite 1200, Denver, Colorado, 80294, appearing for the plaintiff.

STEPHEN JONES, ROBERT NIGH, JR., ROBERT WYATT, and AMBER McLAUGHLIN, Attorneys at Law, Jones, Wyatt & Roberts, 999
18th Street, Suite 2460, Denver, Colorado, 80202; JERALYN MERRITT, 303 East 17th Avenue, Suite 400, Denver, Colorado, 80203; CHERYL A. RAMSEY, Attorney at Law, Szlichta and Ramsey, 8 Main Place, Post Office Box 1206, Stillwater, Oklahoma, 74076, and CHRISTOPHER L. TRITICO, Attorney at Law, Essmyer,

Tritico & Clary, 4300 Scotland, Houston, Texas, 77007, appearing for Defendant McVeigh.

* * * * *

PROCEEDINGS

(In open court at 1:30 p.m.)

THE COURT: Be seated, please.

(Jury in at 1:31 p.m.)

THE COURT: Please resume the stand.

Ms. Wilkinson, you may resume your questioning.

MS. WILKINSON: Thank you, your Honor.

(Frederic Whitehurst was recalled to the stand.)

CROSS-EXAMINATION CONTINUED

BY MS. WILKINSON:

Q. Dr. Whitehurst, on direct examination with Mr. Tritico, you discussed your opinion about the crystals on Q507. Do you recall that?

A. Yes, uh-huh.

Q. And Q507, again, we're referring to Government's Exhibit 664 which is that portion of Ryder truck, that panel that has yellow and red paint on the side; is that your understanding?

A. I know what I was talking about, Q507, but --

Q. Do you know what Q507 looks like?

A. Yes, I do.

Q. What does it look like?

A. It's a piece of material that's got like a red and some yellow and some weaving material in it.

Q. How big is it?

A. Oh, I guess it's about 9 by 9 or 8 by -- or something like that.

Q. 9 inches by 9 inches?

A. It's not a very big piece of whatever it is.

Q. What shape is it?

A. Excuse me?

Q. What shape is it?

A. Well, it's not round. It's irregularly shaped.

Q. And that's the piece that you're referring to when you mentioned Q507; correct?

A. Yes, ma'am, uh-huh.

Q. Now, you told Mr. Tritico, I believe, that you do not believe or in your opinion it would be impossible for those crystals to have remained on Q507 after a rainstorm; is that right?

A. Yes, it's just very strange to me that it's still there.

Q. And are you saying based on that that you believe Q507 was contaminated; that is, someone placed those crystals there?

A. No, ma'am, not at all.

Q. What are you saying?

A. I have -- there's just not enough data for me. Please, just very frankly, I didn't analyze it, I didn't collect it. What I understand about it was it was in a rainstorm. And what

I know as a chemist about ammonium nitrate is it's very soluble
in water, and it's just -- it's -- there's something wrong with
that thing sitting out in a rainstorm. There's just something
missing. Is the word an enigma that says that's out in a
rainstorm and there's still ammonium nitrate crystals on it.
Q. Well, you've said before that explosions are chaotic and
unpredictable events; correct?
A. Yes.
Q. And that random things occur; correct?

A. Yes, uh-huh.
Q. And that sometimes you find residues, but often you don't
find any; right?
A. Yes, but that doesn't apply to this situation.
Q. Just let's stick to the question, Dr. Whitehurst.
A. Yes, ma'am, sure.
Q. And you've said sometimes you don't find any residues;
correct?
A. Yes.
Q. And in this case you thought Agent Burmeister's work was
brilliant in part because he was able to find these crystals
and not just ions, but the actual crystals themselves,
correct?
A. Yes, I thought.
Q. And when you talked about the rainstorm with us, you
suggested that somehow prills might still be found at the crime
scene, even though you're telling us now you can't understand
how crystals would survive; is that correct? You said that on
your direct?
A. Yes, yes.
Q. So you're telling us that ammonium nitrate is porous and
soluble, but somehow you would expect prills that have the same
qualities to survive the rainstorm, but not crystals; is that
what you're saying today?
A. Yes.
Q. So somehow these prills would survive the rainstorm but
the

crystals wouldn't?
A. They're different than the crystals.
Q. They're an amalgamation of crystals, aren't they?
A. They're coated.
Q. And those coatings aren't soluble when placed in?
water?
A. Well, my data from the laboratory shows me that ammonium
nitrate itself will gather up water, but the prills -- when I
had prills, they just sit around

had prills, they just sit around.
Q. So if I put prills -- if you put prills in a cup of water, you're telling me they wouldn't dissolve?
A. No, that's not what I'm saying.
Q. You're saying, then, that the prills are also soluble, aren't they?
A. Well, sure, they're soluble.
Q. So the coating doesn't protect them totally from the moisture of the rain, does it?
A. No, of course not.
Q. So if there was a large rainstorm, you might expect if there were any unconsumed prills -- and we're just assuming now
in the hypothetical there were -- that they could be destroyed by the rain; correct?
A. If they were out in the rain.
Q. Even if they were protected in part, as you said, because the moisture would get to them just like the crystals.

A. No.
Q. If there was a hundred percent humidity, that's what you said, didn't you? You said a hundred percent humidity, didn't you?
A. No, I think you misunderstood me.
Q. Okay. Go ahead. Why don't you explain.
A. My experience with prills and crystalline ammonium nitrate that's not prills comes out of the environment of my laboratory
which is a controlled humidity. If I have prills, I can set them on my desk and they just stay. If I have ammonium nitrate, my ammonium nitrate crystals, they're not protected, coated with wax or clay or whatever. They very often just --
Q. Dr. Whitehurst, are you familiar with how ammonium nitrate --
MR. TRITICO: Your Honor, I'm going to object to Miss
Wilkinson interrupting him in his --
THE COURT: Yes, go ahead.
MS. WILKINSON: I apologize, your Honor.
BY MS. WILKINSON:
Q. Go ahead, Dr. Whitehurst, finish.
A. The ammonium nitrate crystals, themselves, if I sat them possibly even in this courtroom -- I don't know the humidity -- they might sit there and within five minutes, you'd see a drop of water there because they absorb the moisture from, you know,
from the air in the courtroom.

Q. So how do you think those crystals survived getting transported back from the crime scene to Agent Burmeister's

laboratory?
A. You know, that's -- I'm missing some data. And I'm trying to be very frank with you. I'm missing some data. I just don't know. You know, those crystals, for me, if I saw those crystals -- if they were in a rainstorm, I don't know how they survived. But you see, I don't know. It's kind of a unique situation.
Q. So you don't have enough information to make an opinion, do
you, Dr. Whitehurst?
A. About what?
Q. About these crystals. You don't have enough data and as a scientist, you know how important that is to have all the data before you come to an opinion, don't you?
A. My --
Q. You've said that before, haven't you?
A. Yes, my opinion is expressed. I don't know with the data I've got how those crystals could have survived a rainstorm.
Q. Dr. Whitehurst, you don't have enough data to issue an opinion on Q507, do you?
MR. TRITICO: Excuse me. I'll object. It's been asked and answered twice.
THE COURT: Overruled.
BY MS. WILKINSON:

Q. Yes or no?
A. But I haven't offered an opinion.
Q. Yes or no?
THE COURT: What opinion are you asking?
MS. WILKINSON: The opinion that the crystals would have been dissolved or would not remain on Q507 if there had been a rainstorm.
MR. TRITICO: I'll object. That's a misstatement of his testimony.
THE COURT: Sustained.
BY MS. WILKINSON:
Q. Why don't you tell me what your opinion was that you said on direct examination with Q507, Dr. Whitehurst.
A. I don't believe that the crystals on that wood subjected to
a deluge could survive. I don't based on my experience of the data that I've got.
Q. And what I'm asking you is: Do you have sufficient data to
make that opinion, yes or no?
A. Yes. Because I made it.
Q. Do you know how Q507 was found at the crime scene?
A. Well, I understand it was laying on the ground.
Q. You believe it was face down on the ground; is that right?
A. That's what --
Q. And if you found out you were wrong, would that change your
opinion?

A. I would have to reevaluate, yes.
Q. If you found out that Q507 was seated on an angle at the crime scheme with the wood face down that had the crystals, therefore not exposed to the ground, if you found that out, could that change your opinion?
A. No, ma'am.
Q. So it doesn't make any difference how Q507 was found?
A. Well, sure it does. If Q507 was in the building, inside the Murrah Building, very well protected, you know -- no, I misspeak that. That thing out on the rainstorm, I just -- ma'am, I just don't know how the ammonium nitrate crystals can survive the rainstorm.
Q. Well, you saw the crystals on Q507, you have no doubt about
that?
A. I have no doubt about that.
Q. And you have no doubt that Agent Burmeister correctly identified those crystals as ammonium nitrate.
A. I have no doubt.
Q. You're familiar with the multitude of tests that he conducted before he made his conclusion; correct?
A. Yes, I'm also familiar with Mr. Burmeister's professionalism, and I know those were ammonium nitrate crystals if he called them that.
Q. And haven't you said on a prior occasion that if Agent Burmeister checked into the chain of custody on the evidence,

you would have no question about it?
A. That's correct.
Q. Now, you've told us that you don't know how the crystals could have survived the rainstorm; correct?
A. Yes, ma'am.
Q. Do you have any hypothesis on how those crystals got there,
if they didn't come from the crime scene?
A. I know possible alternative explanations, but I'm not sure that it wouldn't be just plain conjecture.
Q. So you have no idea how they got there?
A. No, ma'am.
Q. And you don't believe, though, that they were -- it was contaminated there or placed there by a human being; is that correct?
A. I have no reason to believe that, that's correct.
Q. In fact, you've said that on a prior occasion, that based on the size of the crystals, that it isn't reasonable to you that that item was contaminated; isn't that correct?
A. That's correct.
Q. I'd like to go back to contamination at the laboratory with
you and talk about the procedures. You don't have any

you and talk about the procedures. You don't have any personal
knowledge about what procedures were followed in this case with
regard to Mr. McVeigh's clothing, do you?
A. I wasn't present when the analyses were conducted.
Q. So you don't know what Mr. Mills did with the clothing;

isn't that correct?
A. That's correct.
Q. And you don't know what Mr. Martz did; correct?
A. That's correct.
Q. And you don't know what Mr. Burmeister did, do you?
A. That's correct.
Q. You mentioned a hypothesis that perhaps Mr. Mills placed the box on the floor and somehow PETN or some other residue could have been there and contaminated the box; correct?
A. No, the counsel raised that with me.
Q. And you said that there was a possibility of that; right?
A. Yes; that's correct.
Q. And there's always a possibility of something like that happening; correct?
A. Yes, there is.
Q. If you found out that Agent Burmeister had tested the box and found out that it was negative for any high-explosive residue, would that make you believe that it was less likely that contamination had occurred?
A. In that manner, yes.
Q. And if you found out that Mr. Mills had cleaned his table top, placed down butcher paper, and worn gloves and only used those gloves to deal with the items that were in that box, the sealed box, would that make you believe that contamination was less likely?

A. Yes.
Q. And if you found out that Mr. Hupp, who took custody of the
clothes, had gone through the clothes with a pair of gloves, had never been to the crime scene, had sealed the box and delivered it back to the FBI Laboratory in that same condition,
would that make you believe that contamination was less likely?
A. I don't know Mr. Hopp. Is he a scientist?
Q. He's a fingerprint analyst. He was not at the crime scene.
If you found that out, would that make you believe that contamination was less likely?
A. I have not defined Mr. -- is his name Hopp?
Q. Hupp, H-U-P-P.
A. Hupp as a -- you know, who he is. I don't know about his

A. Hupp as a -- you know, who he is, I don't know about his expertise or where he was or all of that stuff. So I -- you know, I don't know who he is. I can't comment on that.
Q. Well, he's not from the Explosives Unit.
A. Yes.
Q. And he hasn't dealt with explosives. If you knew that, would you believe that it was less likely that the evidence had
been contaminated?
A. You say he's a fingerprint examiner?
Q. Yes.
A. I couldn't say that, ma'am.
Q. Even though he wore gloves, that wouldn't make it less likely there was contamination?

A. If he wore gloves, that would make it less likely. But I don't know what he comes in contact with on a daily basis.
Q. Okay. And what if you were to learn that in the Noble County Jail where Mr. McVeigh's clothes were seized, there was no evidence of any high explosives had been in the area where Mr. McVeigh's clothes were stored, would that make it less likely there had been contamination?
A. Yes.
Q. And would it make it less likely that there's no evidence that anyone had handled those clothes other than the law enforcement officials who were turning those clothes over to the FBI? In other words, there weren't civilians who had touched those clothes or anyone else, would that make it less likely that there was contamination?
A. Yes, the fewer people that touch it, the less likely there is contamination.
Q. And if those people hadn't dealt with high explosives before, would it make it less likely that there had been contamination prior to the seizure of the clothes by FBI?
A. If who hadn't dealt with high explosives, ma'am? The law enforcement officers?
Q. Yes, the local law enforcement at Noble County Jail.
A. Yes; that's correct.
Q. If Mr. Hupp took custody of those clothes and sealed the box and you found that the clothes had been in paper bags, had

been in a sealed box and they had been transported back to the FBI laboratory to Mr. Mills' custody, would it make it less likely that there had been contamination?
A. Sure.
Q. And you know of no evidence or no research, do you, that PETN somehow travels through cardboard boxes, through paper bags, and into the pants pockets of the defendant; correct?
A. Yes, and I would doubt that it would.
Q. And you doubt that because you know what PETN -- the chemical characteristics of PETN; correct?

A. Yes, I know the physical characteristics.
Q. And you've called it a hard and sticky substance; correct?
A. Yes, it has a low vapor pressure, ma'am.
Q. And in contrast to nitroglycerine or EGDN which would potentially vaporize and transfer in the air as you've stated; correct?
A. Yes, ma'am.
Q. So you don't believe, do you, Dr. Whitehurst, that PETN could be transferred from the cardboard box through the paper bag and into Mr. McVeigh's pants pockets; correct?
A. I couldn't see that happening.
Q. And if you found out that Mr. Mills had handled the clothes
and bagged them individually in plastic bags and hadn't touched
the pants pockets, the inside pants pockets of Mr. McVeigh's clothes, would you believe that it would be less likely that

there was contamination?
A. Yes.
Q. And if you found out that Mr. Burmeister had identified high-explosive residue on different portions of Mr. McVeigh's clothes, therefore not just random contamination, but high explosives on two T-shirts and on pants, wouldn't you say that it was less likely there had been contamination?
A. No.
Q. No. So you would have -- that then that would not be random anymore; correct? If you found it on three of the five items or six items that were tested?
A. I would have to ask a question at that point of how the clothes were actually collected. Do you know? If . . . can I explain?
Q. Sure, go ahead.
A. If when they were collected, a law enforcement officer, say, collected them and there was PETN on one of them, okay. There would be -- you know, if the law enforcement officer didn't know what to do, as far as didn't understand a contamination issue, he could contaminate all of the items.
Q. What if Mr. McVeigh took off his clothes, himself, and put them into the bag?
A. Then we wouldn't have to worry about that. It would still -- if Mr. McVeigh had, or the clothes anywhere had PETN on them and you handled -- suppose I had it in my pocket, but

then I handled the shirt or I handled whatever. There would be
a likelihood that you could cross-contaminate.
Q. Meaning Mr. McVeigh would have cross-contaminated, you're saying, as he took off his clothes?
A. Or whoever handled them. One item could contaminate of

them is what I said.
Q. I understand from your direct testimony that you're not really concerned about cross-contamination if they're all from the same individual or the same crime scene -- correct -- because you know it came from that person; whether it came from
their shirt or their pants and moved is not really of great concern to you.
A. If the issue is whether it came from that person, then that
would be correct.
Q. And you're not aware of any evidence showing that PETN transfers from one piece of clothing to another; right? It's just sitting there in the bag -- correct -- for the same reasons that you said that it's a sticky, hard substance?
A. Well, if they rub against each other in transport, if they're all in the same bag. If you put them in separate bags,
I wouldn't expect them to cross-contaminate.
Q. Now, if you also found out that the individuals testing the
items had cleaned their area, had worn clean lab coats, had used gloves and had done what you all called blanking the table
top and putting blanks in between the test, would that make it

less likely there was any contamination of the evidence in the laboratory?
A. Yes, it would.
Q. And aren't those the procedures that should be followed in testing items such as these?
A. Yes.
Q. And are these procedures that you always followed when you conducted tests, Dr. Whitehurst?
A. No, ma'am.
Q. In fact, these procedures have evolved since you started in
the laboratory, haven't they?
A. Yes, they have.
Q. And in large part, they've evolved because of Mr. Burmeister, haven't they?
A. Absolutely.
Q. In fact, you told us about an incident during direct examination about this fancy machine that cleans containers. What's that called?
A. It's a Turbo Vap.
Q. Turbo Vap.
A. Yes.
Q. You weren't the one that discovered contamination in that, were you?
A. No, I wasn't.
Q. Agent Burmeister discovered it, didn't he?

A. Yes, he did.
Q. And he told you not to use the machine. You had been using
it, right, because you didn't know?
A. Sure, we were using it on raw explosives.
Q. And once he brought it to your attention, you no longer used the machine; correct?
A. That we didn't use it on residues any longer.
Q. So as you've been in the laboratory and you've been testing
items and your knowledge has been evolving, you've been changing your procedures; correct?
A. Yes, ma'am.
Q. And that's good science, isn't it?
A. Yes, ma'am.
Q. And your protocols have changed, haven't they?
A. Yes, they have.
Q. And those documents that Mr. Tritico showed you did have some protocols for the explosive residue analysis, didn't they?
Ones you had written, yourself, and I think titled "Explosive Residue Protocols." Do you recall that?
A. Yes, I did. But they're not really protocols. They're an initial attempt at it.
Q. Well, why don't you turn to J400, the defense exhibit.
A. Yes.
Q. And why don't we start with page 921.
MS. WILKINSON: Could I have the ELMO, your Honor?

THE COURT: All right.
BY MS. WILKINSON:
Q. This is page 921, isn't it, Dr. Whitehurst? You can look down at your screen.
A. Yes. Yes. Oh, excuse me. Yes, ma'am.
Q. And isn't that entitled "Protocol for Explosives Analysis"?
A. Yes.
Q. And you wrote that, didn't you?
A. Yes, I did.
Q. And you used the word "protocol," correct, that was your choice?
A. Yes, I did.
Q. And the next page, 922, says visual and optical microscopic -- you can tell me.
A. Yes, ma'am, microscopic.
Q. Microscopic analysis.
A. Yes, ma'am.
Q. And doesn't that tell you how to do that analysis?
A. Yes.
Q. That's a protocol, isn't it?
A. It's not . . . I work for the FBI, and the FBI doesn't

call
this a protocol, ma'am.
Q. Let's look at the top of the page, Dr. Whitehurst.
A. Yes.
Q. "Residue Analysis Protocol"?

A. Yes, ma'am. I'm not at liberty to call this thing a protocol if my employer says that doesn't measure up. Do you know? At the time, you know, as far as I was concerned, it was
a protocol. It's not -- it's not according to what the Bureau's -- the FBI's telling us now, it's not a valid -- it's not an appropriate protocol.
Q. So you're telling us that the FBI has higher standards than
what you had when you wrote these protocols, correct?
A. Oh, no. The FBI actually had lower standards than I had, but we decided what is it that is really a protocol. And this was the beginning. And they have added other things to it.
Q. And it's evolved over time; correct?
A. Yes, it has, yes, ma'am.
Q. And that's appropriate in the scientific community, isn't it?
A. Sure, sure, it is.
Q. And in fact, in 1993, you went to -- you had a conference on explosive residues, didn't you, analysis?
A. Yes.
Q. And you discussed your protocol at the time with people from other countries?
A. Yes.
Q. And your protocol was very similar to some of the other countries who do this type of analysis, wasn't it?
A. Yes, it was.

Q. So, it fell within the generally accepted standards, didn't
it, at the time?
A. I don't know that.
Q. Well, you discussed it with other people who are experts in
this field, didn't you, Dr. Whitehurst?
A. Yes, we did.
Q. And you kept using it after that conference, didn't you? You kept conducting tests, didn't you?
A. Yes, what we --
Q. You issued opinions based on that protocol, didn't you?
MR. TRITICO: Your Honor, I'm going to object to Ms. Wilkinson interrupting when he's still trying to answer the
question.

THE COURT: Sustained.
BY MS. WILKINSON:
Q. Dr. Whitehurst, did you use this protocol after the conference in 1993?
A. Yes.
Q. And did you issue results and opinions based on your testing using that protocol?
A. Sure, uh-huh.
Q. And you wouldn't report out results that you didn't believe
in, would you?
A. No, I wouldn't.
Q. I want to go back to the recovery of prills. There has

been a question in this case about an article by a man named Dr. Robin Hiley. You know Dr. Hiley?
A. Yes.
Q. He's a well-known researcher in this field, isn't he?
A. Yes, I've met him.
Q. And it was suggested that there was some article published by him on the recovery of uninitiated ammonium nitrate prills. Are you familiar with that article?
A. No.
Q. It doesn't exist, does it?
A. I'm not familiar with the article.
Q. Well, you know that in Great Britain, most of the ammonium-nitrate-based bombs don't use ammonium nitrate prills,
do they?
A. I don't know about that.
Q. Oh, you don't. You're not familiar with ammonium nitrate --
A. I know they use ammonium nitrate. Whether they're using prills or not, I'm not --
Q. Do you know that ammonium nitrate is usually ground and mixed with sugar by the IRA?
A. I've heard that.
Q. So there wouldn't really be any reason to look for uninitiated prills over in Great Britain, would there?
MR. TRITICO: Excuse me. I'm going to object. That

calls for speculation on the part of the witness, based on his testimony.
THE COURT: Sustained.
BY MS. WILKINSON:
Q. Dr. Whitehurst, how familiar are you with ammonium-nitrate-based explosives?
A. Well, I know there's quite a few of them out there.
Q. And are you familiar with crime scenes where ammonium nitrate prills were a component of the explosive device?
A. From my training, from my teaching, from my discussions

A. From my training, from my teaching, from my discussions with my colleagues.
Q. What about crime scenes?
A. Well, let me see; what crime scenes have I been to?
I've been -- I haven't been to that many, so -- no.
Q. So you don't have any evidence or studies that show that an uninitiated ammonium nitrate prills are recovered at ammonium-nitrate-based crime scenes, do you?
A. What I have is what I was taught. The discussions that I had, for instance, with Mr. Hiley -- with Dr. Hiley, about those things.
Q. About prills being recovered?
A. About ammonium nitrate being recovered.
Q. I'm asking you -- I'm sorry if I'm not being clear. I'm asking you about ammonium nitrate prills, not crystals that could have come from gels or emulsions or anything like that.

A. Yes, uh-huh.
Q. I'm talking to you about prills.
A. I'm trying to remember the situations. But, you know, I haven't been to those crime scenes where ammonium nitrate prills were used. I've heard about them in my, you know, my training.
Q. Well, you told us on direct examination that --
A. Yes.
Q. -- when a device doesn't function properly, you sometimes find prills; correct?
A. When it didn't function properly.
Q. Right. When it didn't detonate or only a small portion detonated.
A. That's what I was taught, yes.
Q. Now, you've seen the crime-scene photos in the CNN coverage of Oklahoma City, haven't you?
A. Yes, uh-huh.
Q. You have no reason to believe that that device did not function properly, do you?
A. I don't think I can say that.
Q. Is that beyond your area of expertise?
A. Hmm. That's a difficult one. I don't think that I can say it didn't function or did function correctly. It certainly went off, but --
Q. Have you seen the truck parts?

A. Excuse me?
Q. Excuse me. Go ahead, finish.
A. But to say that it all went, that it was a very efficient explosion, I can't say that.
Q. And you can't say that because you weren't at the crime

Q. And you can't say that because you weren't at the crime scene, were you? So you don't know what was recovered.
A. I don't think anybody can say that that thing functioned the way it was designed or not designed to function. I just don't think so.
Q. Are you saying that if there's no recovery of any large portions of the device, there's no recovery of portions of the components of the bomb, that no one can say the device functioned efficiently or properly? Is that what you're saying?
A. It may not have functioned a hundred percent. It may have functioned at 85 percent. At that crime scene, there was a lot
of environmental impact on whatever was left. We don't look at
every, every piece of everything from everywhere. We just can't. It's not physically possible. You know, we might have gone around a corner and found a chunk of ammonium nitrate someplace or HMTD or TNT or whatever; do you know? The possibility of finding everything that came out of that bomb in
the way of energetic material is kind of small.
Q. Dr. Whitehurst, do you know there were 250 agents at the crime scene searching for evidence?

A. Yes.
Q. And have you heard they searched every street, every rooftop, every alley?
A. Okay.
Q. Wouldn't you say that it would be likely they would find major portions -- I'm not talking about teeny, tiny portions that you might like to see to determine what the fusing mechanism is or the initiation system. But major components, if they were there, don't you think they would have found them?
A. Ma'am, if they didn't know what they were looking for --
MR. TRITICO: Excuse me, I'm going to object. That question calls for speculation on the part of the witness.
THE COURT: Overruled.
THE WITNESS: If they didn't know what they were looking for, they could look right at something and not tell at
the time that they were looking at a pile of material. I know of crime scene, for instance, where there's powder all over the
place and were it not for one guy there collecting it, we'd have never known what was there.
BY MS. WILKINSON:
Q. You're aware that Agent Burmeister was on the scene April 20, 1995, aren't you?
A. Yes, I am.
Q. And he has the expertise to make those types of determinations, doesn't he?

A. Yes, he does.
Q. And he has the ability to advise others on what to look for, doesn't he?
A. Yes.
Q. And you would rely on him, would you not, to determine whether that type of uninitiated matter or components of the explosive device were recovered?
A. If he looked where everybody else looked. You can't teach somebody in 5 or 10 or 15 minutes what you learn in years of experience.
Q. You know that bomb technicians, while they have not the expertise you do in chemistry, but they have some understanding
and knowledge of explosive devices, don't they?
A. Sure, they do, yes.
Q. And they understand what to look for when they go out to crime scenes, don't they?
A. Sometimes.
Q. You're not aware of anything that was collected in this case, are you, Agent Whitehurst, that would suggest that this device didn't function efficiently -- are you?
A. Yes, you're right about that.
Q. So when Miss Jones testified here earlier that the device functioned properly, based on her review of the crime scene, the damage, the residue analysis, you can't disagree with that,
can you? Based on the information you have today.

A. I don't know that it functioned 80 percent, 75 percent. I don't know that.
Q. So you can't disagree with her; correct?
A. I don't know -- I've been to the crime scenes. I know what
happens at the crime scenes. I have experience with it, and I know the level of expertise of people that are assisting. And they're doing a good job, they're trying very hard, but they're
blind to some things and they don't recognize things when they see them. And it could very well be there were pieces of that device -- not the device, but the energetic material itself -- that were just missed, that were just missed or that washed away in the deluge, the rain, okay?
Q. And there's also a possibility that no residues were left at the crime scene; isn't that right?
A. Yes, ma'am.
Q. And in fact, if PETN were used as a component of the bomb, let's say in detonation cord, you believe it's very unlikely that those residues would be recovered; correct?
A. Yes, ma'am.
Q. And that's because the PETN would be right at the seat of

the explosion; correct?
A. Yes, ma'am.
Q. And it would be consumed during the detonation; right?
A. I think it would be virtually impossible to find it, yes.
Q. And what if Primadet had been used as part of the explosive

train --
MR. TRITICO: Excuse me, your Honor, I'm going to object as beyond the scope of the direct.
THE COURT: Overruled.
BY MS. WILKINSON:
Q. Would you -- let's assume the Primadet was used as part of the explosive train, again right there in the middle of the bomb; would you believe it would unlikely to find any remains of that, of the Primadet?
A. Yes, ma'am.
Q. And unlikely to find the residues HMX or the PETN in the blasting cap at the end of the Primadet?
A. Absolutely.
Q. And if dynamite were used as a booster in the device, therefore, EGDN being part of dynamite, don't you believe it would be very unlikely you would find EGDN residues at the crime scene?
A. Especially at that crime scene, yes.
Q. And why is that?
A. It was raining.
Q. And what about the size of the device?
A. That would be a good reason, also. Yes, uh-huh.
Q. So you wouldn't be surprised to find out that no high-explosive residues were recovered at the crime scene; correct?

A. Oh, no, ma'am.
Q. That's common in your experience and expertise in trying to extract any kind of residues from these crime scenes; correct?
A. No, my data is limited from, you know . . . I don't think -- I wouldn't be surprised if we didn't see it, but I think it's a very chaotic situation, so I can't predict.
Q. You don't have any concern about Brett Mills' ability to handle evidence in this case, do you?
A. I think he's a very professional examiner.
Q. And you've had discussions with him, haven't you, on how to avoid contamination?
A. I think Brett and I've talked about it. I know -- yes, I think we've talked about it, sure, uh-huh.
Q. And he was aware of those precautions that could be taken back in April of 1995, wasn't he, based on your conversations and his conversations with Agent Burmeister and others in --

and his conversations with Agent Balmelsef and others in
A. Well, I've been told that he put this box on the floor of the Explosive Unit, so it indicates to me that he had some lack
of an understanding of, you know, what the implications of that
were. But I think overall -- I think overall Brett Mills is very professional; and I think, you know, if he's aware that there could be an issue with a particular practice, that he'll certainly not -- you know, he'll avoid that practice.
Q. You don't know whether Mr. Mills cleaned the floor before he put down that box, do you?

A. No, I don't.
Q. At the crime scene, it would not be beneficial to test for fuel oil, would it?
A. Fuel oil is sort of like everywhere. I mean, you know, it's -- there are a lot of automobiles. If you had a diesel fuel truck or something like that, it would be --
Q. If you were looking to determine or test the hypothesis that this had been an ammonium nitrate fuel oil bomb, as a scientist, you wouldn't rely on any findings of fuel oil because they could come from so many other factors; correct?
A. If I were to find prills, for instance, with ammonium nitrate -- I mean with fuel oil in them, I think I could, you know, say that that's consistent.
Q. But other than finding them in the prills themselves. Finding them in the area, finding fuel oil samples would not tell you anything, would it?
A. Yes, it would be suspect.
Q. And you wouldn't suggest that those type of tests be done, would you, knowing that rescue vehicles are in there and other large trucks are in the area?
A. I could see that that would probably be useless, especially
when it was raining.
Q. Dr. Whitehurst, when you're determining whether there's been contamination of evidence, one of the most important things is to go back over the chain of custody; correct?

A. Yes.
Q. And you would consider that part of your responsibility as a chemist before you issued any findings; correct?
A. You would consider that your mind, yes.
Q. And you might do some collecting before and some checking afterwards, but you would want to ensure yourself that there had been a proper chain of custody; correct?
A. You would want to understand where this stuff came from, who -- if you had a question whether there was contamination or
not, you would ask that.

Q. And it's your experience working with Mr. Burmeister that he engages in that kind of research; isn't that right?
A. Yes.
Q. He's concerned with contamination, isn't he?
A. More so than I was when I was in his position.
Q. Now, knowing what you do know now about contamination, would you agree that it's very unlikely that an item has been contaminated if you find three different high-explosive residues on one item?
A. No, I don't think so, ma'am. I work in a laboratory where people go to the bomb range and explosives, demolition technicians come and go; and those people could very possibly be contaminated with all of the kinds of explosives they come in contact. So I have a -- you know, I would differ with you on that.

Q. And it wouldn't matter what those residues are?
A. I couldn't say that. You know, with explosives that are organic explosives that stick to your hand, PETN, HMX, RDX, those sorts of things, it wouldn't surprise me to test people -- maybe not today, because they have a heightened awareness of the problem -- but to have tested people two or three years ago in the Explosive Unit and to have found them to
have been contaminated with any number of explosives.
Q. Well, if you learned that Mr. Mills had handled some earplugs seized from Mr. McVeigh and he had followed the procedures that you and he have discussed; that is, cleaning his table, wearing gloves, and he placed those earplugs in a plastic bag and sent them to Agent Burmeister for testing, who followed the same procedures you're familiar with, wouldn't you
agree that -- and he found three residues -- three different high-explosive residues on those earplugs -- wouldn't you agree
that it was less likely there was contamination?
A. From Brett Mills, yes.
Q. And from Mr. Burmeister?
A. Yes, I wouldn't concern myself about contamination by Mr. Burmeister.
Q. I want to talk to you about one final issue about contamination, and that's the carpet that you've been discussing with Mr. Tritico. You drew this drawing for us, J750, and you told us that you were very concerned about this

carpet; correct?
A. Yes; that's correct.
Q. And you're worried that it could have some kind of residues
held in the carpet; right?

A. Yes.
Q. High-explosive residues?
A. It could, yes.
Q. And vacuuming it wouldn't be sufficient because those residues could be so persistent that even a vacuuming wouldn't clean them; is that correct?
A. Yes.
Q. Now, that carpet was there back in May of 1995, wasn't it?
A. Yes, ma'am.
Q. And when you did your contamination study where you were looking in the areas that you thought would be most likely to have contamination, you didn't have the carpet tested, did you?
A. I guess I didn't -- if I read this and I didn't, I didn't. Yes.
Q. Now, for this carpet to actually contaminate something that
Mr. Burmeister tested, it would take quite a bit of work, wouldn't it?
A. I can't follow you.
Q. Well, let's start here.
A. Yes.
Q. Agent Burmeister's office is right here; correct?

A. Yes; that's correct.
Q. And it's in that office behind a locked door where he extracts samples from evidence; correct?
A. No, ma'am. His door's not locked. It's open.
Q. Well, the door can be locked; isn't that right?
A. Yes, ma'am, but -- sure.
Q. And that's where he takes out samples from the evidence that he's testing; correct?
A. Yes.
Q. And he takes that sample, if he extracts it with some kind of solution, then dries it down, and puts it in a small test tube; correct?
A. Uh-huh.
Q. That test tube is sealed; right?
A. I think so.
Q. That's the procedure you and Mr. Burmeister followed during
your testing, isn't it?
A. Well, he extracts and puts it in a test tube, yes, uh-huh.
Q. And he walks out here and goes up to the equipment; correct?
A. Yes.
Q. And what you're telling the jury is somehow these residues that are stuck in the carpet -- and because they're fibrous -- correct -- because the carpet is fibrous, it's holding those residues in, just like earplugs; correct?

A. Yes, uh-huh.
Q. So they're not jumping out of that carpet; correct?
A. Yes, ma'am.
Q. So somehow the residues you're worried about in this carpet would have had to go through these paint files right here -- and you and I both know that that's a whole group of paint files that are hanging on both sides; correct?
A. Yes.
Q. And those residues would have to jump over that paint file?
A. Yes.
Q. And jumped in Agent Burmeister's sealed test tube; correct?
A. Well, if you wanted them in the test tube, yes, uh-huh.
Q. That's not very likely, is it?
A. The way it would happen --
Q. I'm just asking you to answer my question, Dr. Whitehurst.
A. I can't say that. I can't say that.
Q. You can't say whether it's likely jumped over the paint file --
A. -- jumped right in the test tube?
Q. Okay.
A. Excuse me? I'm confused, ma'am.
Q. I think you've answered my question. Thank you.
A. Oh, okay. Excuse me.
Q. You've told us that you're aware that PETN, which is this sticky, hard substance, is in smokeless powder; is that right?

A. I'm aware of it from this Thornton paper here.
Q. And is that the only source you have for PETN being in there?
A. Yes; that's correct.
Q. You didn't do any other research, did you?
A. No, I didn't.
Q. Why don't you tell us what you consider kind of the seminal work on explosives, the textbook. Or series of textbooks.
A. There's a Picatinny Arsenal Encyclopedia of Explosives and Explosives and Related Compounds.
Q. Are you familiar with Mr. Urbanski's series of textbooks?
A. Yes, I am.
Q. You've relied on those in the past, haven't you?
A. Yes, I have.
Q. And are you familiar with Dr. Yinon from Israel?
A. Yes.
Q. And his Forensic Applications for Mass Spectrometry?
A. Yes.
Q. And would you consider both of those reliable sources for determining whether PETN is in smokeless powder?
A. I don't know that, because I don't know if they treat that particular issue. Do you have a reference in there that treats

that?
Q. I do. From Volume 3 entitled "Smokeless Powder with" --
and you're going to have to help me with this pronunciation --

penthrite?
A. Yes.
Q. Which I understand is PETN.
A. Yes.
MR. TRITICO: I'll object to this witness introducing this evidence -- commenting on this evidence. It's not been introduced.
THE COURT: I think the correct procedure is to show him what you're referring to as a learned treatise and let him comment.
MS. WILKINSON: I'll be happy to do that. I'll hand him both Mr. Yinon and Mr. Urbanski, your Honor.
MR. WYATT: Do you have a copy?
MS. WILKINSON: No, I don't.
THE WITNESS: Ma'am, should I say something?
BY MS. WILKINSON:
Q. Could you just review and see if you're familiar with them.
A. I've reviewed them.
Q. Pardon? I'm sorry?
A. I've reviewed them.
Q. And do they indicate that there's any PETN in smokeless powders manufactured in the United States today?
A. The Urbanski article indicates -- does not indicate that.
The article in Dr. Yinon's book --
MR. TRITICO: Excuse me, your Honor. I'm going to

object to this procedure. He's not agreed these are learned in
the field.
THE COURT: Yes. You have to ask him if he agrees with those sources.
BY MS. WILKINSON:
Q. Dr. Whitehurst, do you recognize both of these gentlemen as
experts in the field?
A. Yes, uh-huh.
Q. And would you accept their research and writings?
A. Yes.
Q. Now, tell me what you were going to say about Dr. Yinon and
his findings.
A. This is not Dr. Yinon's finding. This is Dr. Fetterolf's finding. Chapter 6, "Detention and Identification of Explosives by Mass Spectrometry." And Dr. Fetterolf has rendered some -- in Mr. Burmeister's and my opinion in the

past -- some inappropriate opinions about the materials that you find in explosives. So I would question Mr. Fetterolf. Tadeusz Urbanski is from a foreign country. If I were to place these articles together, I know Mr. Hardy from long many years ago.
Q. So you would rely on Mr. Hardy?
A. But these articles would cause me to question Mr. Hardy. It would.
Q. And would you be surprised to learn that the chart that

Mr. Tritico pointed out to you that says "Organic Compounds for Smokeless Powder" came from an FBI chart that used to be entitled, "Smokeless Powder Constituents and Explosives"?
A. I would -- you know, I didn't know that.
Q. And wouldn't that account for PETN being listed, because of course PETN is found in explosives; correct?
A. Well, that could be a reason; yes, that could be an explanation.
Q. Dr. Whitehurst, based on your knowledge of this case and your experience with working with Mr. Burmeister, do you have any knowledge of any actual contamination of any of the evidence in this case?
A. I have no knowledge of any actual contamination of any evidence in this case.
MS. WILKINSON: Thank you, very much.
THE COURT: Mr. Tritico.
MR. TRITICO: Yes, your Honor.

REDIRECT EXAMINATION

BY MR. TRITICO:
Q. Miss Wilkinson, before we broke for lunch, was asking you a series of questions about this once-in-a-lifetime possibility of contamination; you recall that?
A. Yes.
Q. Is there a machine in the FBI lab that was in use in April or May of 1995 that has a capture end or a detection end that

looks like a flashlight?
A. Yes.
Q. What is that?
A. It's a thermetics instrument. It's called -- it's a GC/Chemiluminescence detection instrument called an EGIS.
Q. And how do you use the flashlight end -- it's not a flashlight, is it?
MS. WILKINSON: Objection, your Honor. I'm not sure how this goes to the cross-examination. It's beyond the scope.
THE COURT: Well, can you tie it up some way with

THE COURT: Well, can you tie it up some way with anything that's in evidence?
MR. TRITICO: Yes.
BY MR. TRITICO:
Q. Have you found a problem with contamination, random contamination, with respect to that EGIS machine?
A. Yes.
Q. How?
A. One of the things that happens --
MS. WILKINSON: Your Honor, I'm going to object again.
The timing and how it's relevant to this case. If it was used in these items.
THE COURT: At this point, the objection is sustained.
BY MR. TRITICO:
Q. When did you find this?
A. The problem?

Q. Yes.
A. About 1993.
Q. And in your opinion, was that problem still persistent in April and May of 1995?
A. I couldn't say that it wasn't, sir.
Q. Was the same instrument still in use?
A. Yes. The same design.
Q. How did it work?
MS. WILKINSON: Your Honor, again, I'm going to --
THE COURT: Well, was it used on any of the evidence that's been introduced in this case?
BY MR. TRITICO:
Q. Do you know if it was used on any of the evidence in this case?
A. If . . . I don't absolutely know. It's part of what we do in the protocol, but I didn't stand in front of the instrument while somebody absolutely -- actually used it.
Q. I'm sorry, I didn't mean to interrupt you. If there are some EGIS results or GC/Chem results in this case, would it have come from that machine?
A. Yes. I would imagine so, yes.
Q. Now, how did the flashlight end work, if you will? It wasn't a flashlight, was it?
A. No, it wasn't --
MS. WILKINSON: Objection, your Honor.

THE COURT: Sustained. It's speculative.
BY MR. TRITICO:
Q. Now, Miss Wilkinson was asking you a series of questions about the collection of the clothes. Do you recall that?
A. Yes.
Q. If you found that the clothes had been placed in a paper

Q. If you found that the clothes had been placed in a paper bag all together in the Noble County Jail and left unattended for a period of time, would that be something important to you in making a determination as to whether they may or may not have been contaminated?
A. Yes.
Q. Would it matter if one or more of the items were contaminated if -- if only one of the items was contaminated, if they're all thrown in the same bag together, does that enhance the possibility that the others will be contaminated?
A. Yes.
Q. With respect to the residents of the Noble County Jail and the employees of the Noble County Jail, would you, Dr. Whitehurst, have taken any reasonable effort to determine if those people had been in recent proximity of explosives? Would you have wanted to know that, is my question.
A. If that were an issue, yes, I would have.
Q. And if you found that the jail took no procedures and no effort to segregate those clothing from contamination, would that have been an issue?

A. Yes.
Q. Miss Wilkinson was asking you about J400. Now, the document that -- the part of J400 -- the protocol is what I'm talking about. The part of J400 that she showed you, that's entitled "Protocol," that's what I was asking you about this morning that you said was your first attempt at a protocol?
A. Yes.
Q. Is that correct?
A. Yes.
Q. Was that ever validated?
A. Sort of partially.
Q. Did you ever finish it, is what I'm asking you.
A. No, we -- we were working on validation studies, and they came to an end.
Q. Why? Do you know?
A. We were --
MS. WILKINSON: Objection, your Honor.
THE COURT: Overruled.
THE WITNESS: We were too busy with other things.
BY MR. TRITICO:
Q. Now, with respect to searching this scene of any explosion -- and this explosion -- for unconsumed prills of ammonium nitrate, I understand that you are not aware of any paper written by Dr. Hiley, but have you had discussions with Dr. Hiley about that very subject?

A. Yes.
Q. When was that?
A. The 1993 conference.
Q. Have you at any time relayed the information that you

received from Dr. Hiley to Steven Burmeister?
A. Yes.
Q. And is that the memo that's in evidence as McVeigh Exhibit

J444?
A. Yes.
Q. If you had been sent to the scene in Oklahoma City in April
of 1995, would you have searched for unconsumed prills of ammonium nitrate, if you thought that might have been the explosive device?
A. It's according to how much time I had, sir. It really is. If I were, if I only had a limited amount of time, you know, I would be looking around for prills, I would be looking around for the kinds of materials that hold residues in them. It would be reasonable to go -- go looking for prills, if you will, among other things.
Q. In your view, is time a factor in an investigation like this?
A. It is practically; it is. We just can't do everything that
needs to be done.
Q. In April and May of 1995, was the FBI working on a case bigger than this one?

A. Well, I can't say that.
Q. Did you have a discussion with Steven Burmeister, Special Agent Burmeister, about looking for unconsumed prills at the scene in Oklahoma City?
A. Yes, we did.
Q. And where did you advise him to look for those unconsumed prills?
A. I felt that the prills would be in areas that were protected from the inclement weather.
Q. Such as?
A. Inside the building itself.
Q. Now, with respect to a prill lasting in the humidity as opposed to the crystal, why is it that you -- you said you could -- you might be able to find the prills as opposed to the
crystal in the humidity? Does that make any sense?
A. Yes.
Q. Okay.
A. The prill is coated. It's got a coating on the outside. And, you know, it makes it a free-flowing material. And the water doesn't come through as well.
Q. Now, is that why you were suggesting to look inside the building?
A. Yes, because if those prills were out in the weather and getting rained on, these probably break down, anyhow.
Q. Now, if I understand your testimony, if you take a prill

and put it on your desk in your office and you take a crystal of ammonium nitrate and put it on your desk in your office, in a controlled environment such as this room here, that crystal is still going to absorb water and turn into water, right, possibly?
A. It ends up as a solution on the page. I've had that experience, yes. On the desk. Uh-huh.
Q. But the prill wouldn't necessarily do that because of the coating; is that what you're trying to say?
A. Yes, that's my understanding of it, uh-huh.
Q. Now, the failure to find PETN at the scene in Oklahoma City
doesn't mean that there was ever any PETN there, does it?
A. If you don't find something, it doesn't mean that it wasn't
there.
Q. That would be the same for shock tube, wouldn't it?
A. Yes.
Q. Dynamite, certainly. EGDN?
A. Yes.
Q. In your 1995 study on contamination, were you allowed to sample the safe in the Explosives Unit?
MS. WILKINSON: Objection, your Honor.
THE COURT: Sustained.
BY MR. TRITICO:
Q. If you found that the earplugs in this case were stored in the safe in the Explosives Unit, would you want to know if that

safe was contaminated prior to the time that you put the earplugs in it?
A. Yes.
Q. In 1995, when you conducted your contamination study, were you allowed to sample the safe?
A. I don't --
MS. WILKINSON: Objection.
THE COURT: Allowed to? Isn't the question did he?
BY MR. TRITICO:
Q. Did you?
A. I'd have to look at the notes themselves, sir, to find out if the safe was --
Q. Do you still have them there?
MR. TRITICO: May I approach?
THE COURT: Yes.
THE WITNESS: I don't see that it was checked.
BY MR. TRITICO:
Q. Now, did you complete that study after you started it?
A. Well, this -- this particular contamination study was written up; and then I went to do another one, but I didn't complete that.
Q. All right. With respect to the locking of Mr. Burmeister's

Burmeister's
door -- Special Agent Burmeister's door: Have you seen his door locked on few, or many occasions?
A. Well, he locks it every night, but it's open during the

daytime.
Q. And have you seen others in his office?
A. Yes, all the time.
Q. Have you had occasion to see individuals in his office that
have been at the bomb range, if you know?
A. I know there are Explosive Unit personnel in his office.
Q. And would that have been occurring in April and May of 1995?
A. Yes.
Q. Would Mr. Burmeister have conducted extracts in his office?
A. I don't know that, sir. Excuse me --
Q. How about acetone extract?
A. I don't understand why he would, because acetone's a noxious stuff. I would do it under the fume hood, but he might
have.
Q. Miss Wilkinson asked you if the particles of explosive that

may be contained within the carpet are likely to jump over the bookcase and into the test tube. Do you recall that?
A. Yes.
Q. Is that your concern with the carpet?
A. Yes.
Q. What are your other concerns with the carpet?
A. It's in a trace analysis laboratory. The concern is that when you vacuum it -- materials on the carpet isn't just going to move on its own. And when you vacuum it, you suck the

materials and all the dust and dirt particles into your vacuum cleaner, and these are explosive materials or sticky materials;
and you can see dust come out of those vacuum bags when they go
through the lab, you know, when they're vacuuming, and that dust could -- we could do a contamination study today and find we were totally clean and the cleaning people come through tonight and vacuum that thing, and tomorrow we'd be dirty again; and we wouldn't know it unless we tested it tomorrow. It would be a random contamination. We wouldn't know we were contaminated unless we tested.
Q. And when the vacuum cleaner goes over there and throws the dust around, you don't know necessarily where it lands, do you?

A. That's correct.
MR. TRITICO: I thank you, sir.
I pass the witness.
THE COURT: Any other questions?
MS. WILKINSON: No, your Honor.
THE COURT: Are you excusing this witness?
MR. TRITICO: Yes, your Honor, I believe so.
MS. WILKINSON: Yes.
THE COURT: You may step down. You're excused.
Next, please.
MR. TRITICO: Also, your Honor, can the attorneys be excused from the courtroom as well?
THE COURT: Yes.
MR. TRITICO: Dr. John Lloyd, your Honor, please.
THE COURT: All right. If you'll come forward, please, and be sworn.
THE COURTROOM DEPUTY: Would you raise your right hand, please.
(John Lloyd affirmed.)
THE COURTROOM DEPUTY: Would you have a seat, please.
Would you state your full name for the record and spell your last name.
THE WITNESS: John Brian Ford Lloyd, L-L-O-Y-D.
THE COURTROOM DEPUTY: Thank you.
THE COURT: Mr. Tritico.

DIRECT EXAMINATION

BY MR. TRITICO:
Q. Dr. Lloyd, you're not from Texas, are you?
A. That is correct.
Q. Where are you from?
A. I'm from England.
Q. And what town? What city in England?
A. From the West Midlands near Birmingham.
Q. What is your profession?
A. I'm a forensic scientist.
Q. How long have you been a forensic scientist?
A. Since 1966.
Q. Can you describe for the ladies and gentlemen of the jury

your educational background.
A. My academic qualifications are doctor of philosophy, doctor of science. My professional qualifications are charter chemist and fellow of the Royal Society of Chemistry.
Q. What's a charter chemist?
A. It is a -- I think comparable to your licensed practitioner of chemistry or engineering and so on in this country.
Q. And you said you were a fellow chemist?
A. I am.
Q. What is that?
A. The fellowship of the Royal Society of Chemistry is the

senior rank within the Royal Society of Chemistry, and one is appointed to that post by election of a constituted committee.
Q. And what is the Royal Society of Chemistry?
A. It is the senior body representing professional and academic chemists in England.
Q. How long have you been a charter chemist?
A. For about 20 years.
Q. And how long have you been a fellow of the Royal Society of
Chemistry?
A. For a similar length of time.
Q. What is the order -- are you an officer in the Order of the
British Empire?
A. Yes, I am.
Q. What is that?

A. It is an honor conferred by the Queen, conferred by -- for contribution to forensic science.
Q. And when was that honor conferred upon you?
A. In 1990. 1991.
Q. Now, I believe you testified that you've been working in forensic science for approximately 30 years; is that right?
A. Yes.
Q. Does your work include working on particular individual cases?
A. Yes, it does.
Q. And would that include explosions and bombings?
A. Yes, it does.
Q. Have you performed any research in the field of forensic science?
A. Yes, I have pursued research in forensic science for a number of years. I have published a number of scientific papers concerning forensic science and including explosives work.
Q. And how many papers have you published on explosives work?
A. Up around 20.
Q. And have you been called upon from time to time to testify as an expert witness?
A. Yes, I have.
Q. And approximately how many times have you testified as an expert witness?

A. Overall, I suppose on the order of a hundred times throughout my career.
Q. And of those hundred times, approximately or what percent of those were relating to explosives-related cases?
A. Around 20 or 30, I suppose.
Q. What is the United Kingdom's Government Home Office of Forensic Science Service?
A. It was the government forensic science service. It was

A. It was the government forensic science service. It was supported by the government, providing a service, mainly to the police forces. It has now been converted to a self-financing agency.
Q. It's been converted to what?
A. An agency.
Q. Of the government, sir?
A. Yes. It's controlled by the government, but it has to be self-financing now.
Q. And were you employed there?
A. Yes, I was.
Q. For how long?
A. Until 1991.
Q. What was your position there?
A. For a large part of the time, I was a senior principal scientific officer on a special merit personal promotion.
Q. What does that mean?
A. It's a special post of which are there only three holders

at that particular time which is created for particular people to work very much more on their own initiative than they might otherwise be able to do and to free them from administrative work.
Q. Now, you left there in 1991; is that correct?
A. That's correct.
Q. And what have you done since then?
A. I set up a consultancy. In forensic science.
Q. And in the casework that you've -- that you've done in your career, for either prosecution or defense, either side, does that involve the chemical and physical scientific evidence?
A. That is right.
Q. And would that include chemical and physical scientific evidence as it relates to explosives?
A. Yes.
Q. Have you had occasion in England to work on some notable cases?
A. Yes, I have. Cases which have received quite a lot of publicity; that is right.
Q. And briefly can you tell us some of the notable cases that you've been able to work on.
A. I worked on the Birmingham 6 appeal and was largely responsible for the evidence that resulted in success --
MS. WILKINSON: Objection, your Honor.
THE COURT: What's the objection?

MS. WILKINSON: He's going to talk about conclusions of the case instead of just the cases that he worked on. I'm not going to object to him talking about the cases, but the conclusions.

BY MR. TRITICO:
Q. What was the case, the Birmingham 6, appeal?
A. I worked on that case.
Q. Was that case reversed?
MS. WILKINSON: Objection, your Honor.
THE COURT: Sustained.
BY MR. TRITICO:
Q. What other cases have you worked upon?
A. The Judith Ward appeal.
Q. And any others?
A. I was a representative of the Maguire family in the investigations into their miscarriage of justice.
Q. And have you had occasion to testify in courts, aside from today, outside of England?
A. I've testified in Germany and in the Republic of Ireland.
Q. And the United States?
A. I haven't testified in the United States.
Q. Oh, this is your first time?
A. It is.
Q. Okay. Have you authored any, any works that were included in books, any chapters, I guess, for books is what I'm trying

to say.
A. I authored a chapter in Advances in Criminatography on the HBLC explosives, and I have authored two other chapters on forensic on -- I beg your pardon -- on fluorescent spectrometry
which were not concerned with the explosives.
Q. And have you been invited to lecture both in England and internationally on your work in forensics?
A. That is correct.
Q. And would that be on few or many occasions?
A. I beg your pardon?
Q. Few or many occasions?
A. A few occasions.
Q. As a matter of fact, were you invited to lecture to the FBI
in Quantico, Virginia?
A. I've lectured at a symposium held by the FBI at Quantico, yes.
Q. I see. Now, you have either been present or read the testimony regarding the forensics and the scientific matters in
this case; is that right?
A. Yes.
Q. And you missed some of the testimony because you had to go back to England; is that right?
A. Yes.
Q. You have either seen or read the testimony regarding protocols that has been introduced thus far in this case; is

that fair?
A. Yes.
Q. Just tell us briefly why is it important for a forensic lab
to have a protocol.
A. A protocol is a document specifying a scientific procedure.
It would include the basis of the procedure, it will include specifications for how the procedure is followed, and it will include specifications for how the results obtained by that procedure are to be interpreted and used.
Q. What do you mean by the last part, how they're going to be interpreted and used?
A. Any scientist embarking upon an analysis or an investigation of any sort should have clearly defined objectives. He should be fully aware of how he will interpret whatever results he is likely to get. He should because of his
protocol know what sort of windows of variation within which he
can allow his results to fall. A scientific measurement is not
something which is absolutely precise; it can vary. The measurement, for example, might be 50, and on another occasion it might be 51 or 49 and so on.
The scientist must have determined before he starts the experiment precisely what latitude he is going to allow for
his results to take up.
Q. And that's the window of variation you were talking about?
A. Yes, it is.

Q. Now, a window of variation, if you can explain it, is that -- well, explain what you mean by a window of variation.
A. It allows for some free play in the results. As I say, a scientific measurement is not something which is precise. It can vary. It can vary within limits. And it is important that
those limits should be predetermined before any work is done using the protocol.
Q. Briefly what items, what entries would you expect to see in
a proper protocol at a forensic lab, trace analysis lab?
A. I could except -- I could expect to see fully defined the basis of the technique, the qualifications of the people who are fitted to carry out the technique. I would expect to see specifications for the reagents, for the instrumental settings.
I would expect to see specifications for the standards used. I
would expect to see a step-by-step detail of the procedure to be followed, and as I've just been referring to, I would

expect
to see how the results should be interpreted and used.
Q. Would this be for each machine or just a general protocol?
A. A protocol might include the use of several machines. It might be split up into parts.
Q. Let me show you what's been introduced into evidence as Government Exhibit 914.
Do you see that on your screen?
A. Yes.
Q. And you've seen this before?

A. I have. I believe so.
Q. Is that a protocol?
A. No.
Q. Why?
A. It's a flowchart.
Q. This doesn't have the items that you just discussed specifying what should be done at each step of the way; is that
right?
A. That is correct.
Q. And it doesn't tell you the parameters for the experiment at the end, or the window of variation; is that right?
A. That is correct.
Q. Let me show you what's been introduced as McVeigh Exhibit J400. And you've seen this before; is that right?
A. Yes.
Q. Have you reviewed the attachments to McVeigh Exhibit J400?
A. Yes.
Q. Are these protocols?
A. No.
Q. Why?
A. They do not contain what I consider to be essential in a protocol which is a definition of how the results are going to be evaluated at the end of the experiments. Some of the details contained in there are a step towards protocols, but they are in my view incomplete.

Q. Dr. Lloyd, would you please explain to us what is meant by the term "quantification" in trace analysis.
A. Simply that the analysis should determine or estimate as far as possible how much of the detected substance is present.
Q. And what's the purpose of quantifying your results in trace
analysis?
A. Oh, quite simply and obviously, the evidential significance
of the trace depends on how much there is of it.
Q. Why?
A. For example, a person who had been in recent contact with explosives might be contaminated with a substantial amount of

explosives might be contaminated with a substantial amount of explosives. He might be contaminated with a very small amount if the contamination was an event that had occurred sometime ago. Of course one can't be precise, but at least it is of some assistance to an investigator to know these things.
Q. We've heard several times throughout this trial the term "microgram," "nanogram," and "picogram." What are those?
A. If we start off with an ounce. In an ounce there are 28 grams. A microgram is a millionth of a gram. A nanogram is
a billionth, and a picogram is a trillionth of a gram. It should be respected that these are of course very small amounts
of material and that when one is considering quantities in terms of nanograms, one is considering dust-sized quantities. Dust -- I beg your pardon.
Q. There's some water there if you --

A. Thank you very much. Excuse me.
In considering nanogram quantities, one is considering
dust-like particles of material.
Q. At the nanogram -- does that mean you can see a nanogram or
you can't, a nanogram of substance?
A. Not as a rule. One might be able to see a particle of that
size perhaps in a sunbeam as one can see dust particles in a sunbeam.
Q. Would these measurements, the microgram, the nanogram, and the picogram, are these the amount of substance that you are sometimes testing in a trace analysis lab?
A. That is correct.
Q. How far down generally can you, can you test in a level at a trace analysis lab; in other words, how many picograms or how
many nanograms can you test down to?
A. This does depend upon the instrumentation that is in use and upon its level of maintenance, but one would expect to be able to detect usually around the nanogram region and sometimes
less, going down into the picogram region.
Q. For instance, the CZE, would it go down to the picogram region?
A. That probably would not. That is mainly used for the determination of ions, the pizoelectrophoresis.
Q. I see. How about IMS?
A. The IMS would go down to the nanogram level, certainly.

Perhaps below.
Q. And the GC/Chem?

A. That would have a similar sort of sensitivity.
Q. A GC ECD?
A. Again, comparable.
Q. How about an LCMS?
A. That would be less sensitive.
Q. It wouldn't go down to the picogram area?
A. No, I think not.
Q. How about a GCMS?
A. That would be intermediate, I think, between the GC ECD and the liquid chromatography mass spectrometry.
Q. Now, is the quantification of the amount of residue that you're testing on a questioned sample important with respect to contamination issues?
A. Yes, it is.
Q. Why?
A. If, for example, one was working in a laboratory where background levels of contamination were of the order of ten nanograms, then if one obtained quantitatively a result of ten nanograms on a specimen, then clearly one could not accept that as a valid result. It is really too near -- or it is on the base-line level. One would expect to see substantially more than ten nanograms on your questioned sample if you are going to say this is a significant result.

Q. In reviewing the evidence in this case, have you found any evidence or any charts showing that the FBI lab quantified any of the results of the testing that they did with respect to the Oklahoma City case?
A. I have seen no quantitative data.
Q. If you have no quantitative data, how can you ever rule out the possibility of background contamination?
A. You cannot rule out the -- I beg your pardon. Without knowing the level of background contamination, one can't attach significance to the results one obtains from questioned samples. I may have misread your question.
Q. Can you explain that a little bit better.
A. Could you repeat the question, please?
Q. Sure. If you don't quantify the results of the testing that you're performing on the questioned samples, how can you ever rule out the existence of background contamination?
A. The background contamination is something which will have to be separately determined. And unless you know that figure, then you can't rule it out.
Q. And so, in other words, if I understand your testimony, you would have to make some efforts, reasonable efforts, to determine what the level of background contamination is in

your
lab; right?
A. Yes, that is crucial.
Q. Is it possible that every lab -- strike that.

Is it possible that any lab on any given day is going
to be free of contamination?
A. No.
Q. Why?
A. Any laboratory which handles explosives is inevitably going
to acquire some level of contamination. It may be very small. It may be very high. One can't make assumptions about it. It is something which has to be experimentally determined.
Q. And once you determine what the level of your background contamination is, then what can you do with that information?
A. It will provide with you a guide of what you should consider to be significant in your questioned samples. Given that you have determined the quantities in those.
Q. Let's say, for instance, you're working in a lab that you're employed at, and you know the background contamination level is ten nanograms, if I can use that as just a figure. If
you tested a sample, questioned sample and quantified it and got ten nanograms or less of PETN, what would you do with the information?
A. I would disregard it.
Q. Why?
A. Because I could not exclude the possibility that there was a contamination of my questioned sample due to the circumstances in which the analysis had been made.
Q. Have you seen any evidence in this case that the FBI lab in

April and May of 1995 had any regular monitoring of background contamination in the explosive trace analysis lab?
A. I see no evidence that there was regular monitoring.
Q. Do you have an opinion as to whether or not that is a scientifically sound method for a trace -- explosives trace analysis lab to employ?
A. I think it's crucial that a trace explosives laboratory should employ routine monitoring for contamination.
Q. Have you reviewed the testimony of Special Agent Burmeister
and the testimony of Miss Jones in this case?
A. I have seen those transcripts, yes.
Q. You were not able to be present for that; is that right?
A. I beg your pardon?
Q. You were not able to be present for that; is that right?
A. That is correct.

A. That is correct.
Q. Now, have you read Special Agent Burmeister's testimony regarding why the FBI lab did not monitor for background contamination levels in the trace analysis area?
A. Yes, I have read that.
Q. What is your understanding of his reasoning?
A. I found it rather difficult to follow. But it is my understanding that he states if he analyzes a particular section of the garment for contamination, he will not be able to reproduce that analysis with another garment. And that is my understanding. I'm afraid it doesn't really seem very clear

to me.
Q. In other words, I guess the question more is about quantitative analysis than the background contamination; is that right?
A. Yes.
Q. If I understand what you're trying to tell me -- and correct me if I'm wrong -- his testimony was that if you test this area around my button on the jacket, you'd have to do that
on every jacket after that in the same area; right?
A. That is my understanding, yes.
Q. What -- do you agree with that?
A. Well, I don't see any problems of doing it, if you would so
wish to do it.
Q. Do you have to do it that way?
A. No.
Q. To do quantitative analysis?
A. No. One can do other particular areas, like the pockets or
one can do the whole garment. I mean there is no difficulty in
doing that.
Q. Do you accept the findings in your -- personally, a forensic chemist and science, scientist, do you accept the results from trace analysis work if there is not any quantitative analysis done?
A. I think under those circumstances the, the results are of a
very limited value because one cannot exclude the possibilities

of the inference of background contamination and so on. And if
one does not know the quantities, it's very difficult to place an interpretation on them in terms of how long the contamination may have been there, whether it's recent, whether

it's long standing, and so on.
Q. If you haven't set the parameters or the window of variation for the experiments that you're conducting, do you feel as a forensic scientist and chemist that those are good, solid results?
A. It is not at all acceptable, not in any way, that results can be produced which haven't been referred to the expected level of variation of the technique. It is in my view not simply playing a game without goal posts -- it is in fact playing a game with no goal posts whatsoever.
Q. How do you -- how do you as a forensic chemist interpret the results when you don't know what the window of variation is
for the particular test that you're looking at?
A. It's not possible to do that.
Q. Why?
A. Because the judgment is an entirely subjective judgment. It is open to the objection that it seems to be the so-called scientific results are being used to justify some preconceived opinion.
Q. Now, we've talked generally about background contamination in a lab. You're familiar with the testimony regarding the

packaging of Mr. McVeigh's clothes, are you not?
A. Yes, I am.
Q. And what is your opinion about the way in which those clothes were packaged? Is that forensically sound or not?
A. It is not forensically sound.
Q. Why?
A. They were packaged in paper, which was -- it's permeable to
some explosives, as has already been described. I understand the bag wasn't sealed. It seemed to have just been folded over
at the top.
Q. What's wrong with that?
A. It isn't airtight, so that particulate matter can go in and
out.
Q. What about plastic Ziploc bags?
A. For explosives such as ethylene glycol dinitrate, EGDN, and
nitroglycerine, they are totally unsatisfactory.
Q. Why?
A. Because the polythene of which they're made is permeable to
such explosives. One can show that -- very easily that explosives can permeate those bags within a matter of hours.
Q. Now, if we place -- if we're going to use the paper bag, should we place all of the clothes in the same bag?
A. Well, if you so wish. If you're interested in examining the residues on any particular article of clothing, then clearly that is not an acceptable practice.

Q. Now, let's say we put it in the paper bag, all the clothing
in the paper bag, and then we put it in a box and tape the box up. Is that sufficient?
A. It might. It would not prevent the ingress of EGDN and nitroglycerine. How well it was taped up would depend upon whether it was accessible to particulate material. It's impossible to know.
Q. Now, we've talked about the paper bags and the Ziploc bags.
Is there other methods whereby you can protect the items of potential evidence from contamination, other than a paper bag and a Ziploc bag?
A. Yes. There are other forms of containment. Bags made of nylon film are impermeable on the whole. Metal-foil-lined bags
have been mentioned, and I understand that the FBI is now using
paint cans for containing exhibits which are susceptible to contamination.
Q. And are all three of those better methods than a paper or a
nylon bag -- a plastic bag?
A. Yes.
Q. You said a nylon bag. It's not a nylon like a Windbreaker.
Are we talking about something like that, or something different?
A. No, we're talking about nylon film. It looks a bit like polythene, but it has a different feel to it.
Q. And in your opinion, has it been a recent discovery that

Ziploc or polyethylene bags are not suitable or not the best method for containing evidence on a trace analysis issue?
A. It's been known for many years that polythene containers are not suitable.
Q. Now, earlier you mentioned -- we talked about -- I think we
did, anyway -- transportation issues with respect to levels of contamination. What issues come up in your mind with respect to transporting evidence, from a contamination standpoint? Did
my question make sense?
A. No.
Q. Well, I don't blame you.
Are there issues related to the transportation of evidence in the contamination area? In other words, can evidence be contaminated in the transportation?
A. Yes, that is a possibility. Depends upon the level of

contamination of the vehicle.
Q. How do you know, if you don't check the vehicle?
A. You can't know. I think this is the whole point of all of this argument concerning contamination: that it isn't adequate to make assumption and speculation that contamination could not have occurred. It's something which should be determined by experiment. If it's not determined by experiment, then any test results that you get on a specimen is meaningless. It has no basis.
Q. What about an airplane with respect to the air pressure:

Does that pose a problem or a risk?
A. The variation in air pressure in an airplane could pump air in and out of the contents of a bag or of a box.
Q. Now, can you briefly describe the control measures that you feel should be taken to protect evidence from contamination from the collection to the entry into the lab.
A. Quite simply that when the clothing is removed -- if we are concerned with clothing -- it should go straight into an appropriate container; and that should go to the laboratory, where it should not be opened or touched until it is received by the person who is going to do the analysis.
Q. How do you feel about a situation where the person checking in the clothing -- since we're talking about the clothing -- sets the box of the clothing on the ground and then places it up on his prepared examination table?
A. I understand this was done in an Explosive Unit. It is a matter of experience that such places are subject to contamination, particularly the floors. If the box was put on the floor, it would become contaminated. It was then put on the table, the table surface would become contaminated, which I understand is brown paper. And generally, anything else which was put on the brown paper would be very vulnerable to contamination.
Q. Have you seen any information which would indicate to you that the FBI lab in April and May of 1995 had tested the floor

in the Explosives Unit for contamination?
A. I have seen no evidence that I'm aware of that refers to this particular procedure concerning the box and the table.
Q. Now, you said, "especially the floor," a moment ago. Why especially the floor?
A. Partly it is a matter of experience that that is what happens in units such as the Explosive Unit. It's happened at

happens in units such as the Explosive Unit. It's happened at laboratories in England. It's expected because it's carried onto the floor by people's feet.
Q. Do you -- have you seen labs that take special precautions with respect to people's feet?
A. Yes. Both the laboratory in which Linda Jones works and the Belfast laboratory adopt disposable overalls and booties to go on the feet and many other precautions for people working in those laboratories.
Q. Are you familiar with any studies with regard to contamination in the environment and places like planes and trains and taxi and military planes and things like that?
A. Some work has been done in England by Dr. Hiley, of whom we have already heard.
Q. Robin Hiley?
A. Yes.
Q. And what did he find with respect to contamination? I'm talking about -- this is explosive residue; is that right?
A. Yes.

Q. What did he find with respect to contamination in the environment in places like the trains or the taxi or things like that?
A. He found contamination by RDX in some taxis and some airports and in police stations. If I might add, I beg your pardon, that the contamination in police stations went far beyond RDX but included PETN and nitroglycerine.
Q. Now, you've had occasion, have you not, to review the notes that were provided from the FBI lab in this case; is that correct?
A. Yes.
Q. Based on your overview and your review of the notes that were provided, do you have any concerns about the method and manner in which the clothing and personal possessions in this case were handled by the FBI lab?
A. Well, it is a matter of concern that they were unpackaged and that they were taken to various units before they were finally subjected to trace analysis by Mr. Burmeister.
Q. Why do you find the fact that they were taken to various units in the lab of concern? And I'm assuming you mean other than the residue analysis area.
A. Yes. Because I have seen no evidence that there were precautions taken to ensure that contamination should not have occurred whilst the exhibits were being walked around these various other parts of the laboratory.

Q. Now, you heard the evidence that Mr. Mills removed the

items of clothing from the box and placed them in individual polyethylene bags. Have you heard that?
A. Yes.
Q. Do you have an objection to what you know about the procedure that he utilized in doing that?
A. Well, it's unacceptable that items should be repackaged when they're received in laboratory, particularly in the Explosive Unit. It doesn't seem acceptable to me.
Q. If I understand you correctly, the objection is that it was
done at all in the Explosives Unit. Is that what you're saying?
A. That it was done in an Explosives Unit is -- makes it even worse. But, I mean, really it shouldn't happen in any case, because one would hope that the person analyzing the -- finally
analyzing the item will be able to answer for the state of the packaging when he receives it. Clearly, that's impossible under the arrangements which were in place.
Q. What's a control sample?
A. The meaning is ambiguous. It can mean either a sample which is intended to show that we have a blank, a blank sample,
or it is also more commonly in analytical laboratories used to mean a sample which is being deliberately made up to simulate a
real sample in order that one can check that the system is working properly.

Q. And what's the purpose in using control samples?
A. Well, on the one hand, to make sure the system is working properly; and on the other, in the other sense, to make sure that there is no contamination involved in the procedure.
Q. Should control samples be taken only in the lab, or should they be taken in other places as well?
A. If the items have been exposed in other places, then it clearly would be helpful to have control samples taken in those
places, though clearly, if the procedures have been appropriate
and proper packaging have been used, then that would not be necessary.
Q. So I understand what you're telling me correctly is, for instance, the clothes: Control samples possibly should have been taken at the Noble County Jail?
A. If the clothing had been exposed to the environment there, yes.
Q. And from the box from which they were put -- the box that they were put in prior to them being put in it?
A. Yes.
Q. The plane that they were transported in to the lab?
A. That is quite correct.
Q. And the surface upon which they were extracted from the

box
to be repackaged; right?
A. Yes.
Q. Have you seen any evidence in this case that those control

samples were taken with respect to Mr. McVeigh's clothes?
A. No.
Q. In your mind, is there -- what's -- well, we've already gone over that. We'll just skip that.
Who was the first forensic examiner that you can tell from what you've reviewed and read in this case to handle or analyze Tim McVeigh's clothes?
A. The first examiner to analyze them appears to be Mr. Martz.
The first person to handle them appears to be Mr. Mills.
Q. And Mr. Martz handled the clothing how many days after Mr. McVeigh's arrest, if you know?
A. A day or two. I can't remember precisely the number of days.
Q. Now, this is what we've already talked about. Mr. Martz had them, and then they went to Hair and Fiber and Special Photo and then to Mr. Burmeister; is that right?
A. Yes.
Q. Have you reviewed the tests that were performed by the lab on the pants, Mr. McVeigh's pants?
A. Yes, I have.
Q. And who at the lab performed forensic testing or forensic analysis on the pants; do you know?
A. Mr. Martz and then Mr. Burmeister.
Q. What were Mr. Martz's findings with respect to the pants?
A. May I refer to my notes?

Q. Yes, sir.
MS. WILKINSON: Objection, your Honor. Mr. Martz made
no findings. If he's asking for the data he generated -- but he made no findings.
THE COURT: I don't know of any findings.
BY MR. TRITICO:
Q. Can you tell, from looking at the notes and the charts that
you've read, the results of Mr. Martz's testing?
A. Yes.
Q. And what was the result of that testing?
A. May I refer to some summary notes that I made?
Q. Yes. Please.
MS. WILKINSON: Your Honor, while Dr. Lloyd is looking
at his notes, may I make an objection?
THE COURT: Well, I don't know what notes he's looking

looking
at. Is he looking at notes from the FBI Laboratory, or what?
MR. TRITICO: This is just a summary that he made, so
he wouldn't have to go through all of the pages of them.
THE COURT: I don't know how counsel or I or the jury
or anyone know what notes he made notes from.
MR. TRITICO: Do you want me to ask him a few questions about them?
THE COURT: I think you better.
BY MR. TRITICO:
Q. What are those notes you're looking at?

A. A summary of the results that I've culled from the bundle of Burmeister's laboratory notes.
Q. How many pages of notes did you go through that you received from me or that I got from the Government?
A. The total size of Mr. Burmeister's bundle was about 5,000 pages.
Q. And from that 5,000 pages, you made some notes with respect
to the clothing and Q507 and a few other items; is that right?
A. That is correct.
Q. And that was for the purpose of assisting you in recalling what the notes said without having to go back and look through all 5,000 pages?
A. That is correct.
Q. Have you had a chance to refresh your recollection with respect to the pants?
A. Yes.
Q. What did you find with respect -- I'm sorry.
MS. WILKINSON: I'm going to object, again, to discussing Mr. Martz's findings when they're not --
THE COURT: These are Burmeister's notes, he said.
MR. TRITICO: These are the notes that we received from the Government that included Mr. Martz's work, and they were stamped --
THE COURT: My understanding of what the witness said
is they're from Burmeister's notes.

Is that right?
THE WITNESS: Yes. It is correct that Mr. Martz's charts and conclusions were included within Mr. Burmeister's bundle of laboratory notes, your Honor.
THE COURT: All right.
MS. WILKINSON: Could I just ask Counsel to point out
to me what notes Dr. Lloyd is --
THE COURT: We'll do that at the recess, and then

you'll have a better opportunity to understand what's being done here.

You may step down, now, sir, and we'll be taking our afternoon recess.

And, members of the jury, you'll be excused now for the usual rest period of 20 minutes, with the usual cautions of avoiding discussion of the case or any aspect of it. And anything outside the evidence should not come to your attention during this period.

Excused, 20 minutes.

(Jury out at 3:11 p.m.)

THE COURT: All right. Recess, 20 minutes.

(Recess at 3:12 p.m.)

(Reconvened at 3:31 p.m.)

THE COURT: Be seated, please.

(Jury in at 3:31 p.m.)

THE COURT: Dr. Lloyd, if you'll -- if you'll resume

the stand, please.

Mr. Tritico, you may continue.

MR. TRITICO: Thank you, your Honor.

BY MR. TRITICO:

Q. We were talking about the pants before we took the break. Do you recall that?

A. I do.

Q. With respect to the testing that you have viewed, that you have examined from the lab notes that were provided, were consistent results obtained with respect to the pants?

A. No.

Q. Can you tell us why, how you found that.

A. Mr. Martz conducted IMS tests on the pockets and found that RDX was present. Mr. Burmeister did the same experiment, and he obtained response typical of nitroglycerine.

Q. What conclusions, if any, do you draw from that inconsistent testing?

A. It is difficult to draw any conclusion except that one explanation is a contamination.

Q. With respect to the testimony of Special Agent Burmeister that Mr. McVeigh was right-handed, do you find that important?

A. I find it unsurprising.

Q. Okay. Assuming that he is right-handed, do you find that important in your view of the testing that was done on the pants?

A. I don't see what importance is attached to it.

Q. Now, you're familiar with the testing that was performed on

Mr. McVeigh's car, are you not?
A. Yes.
Q. Are you familiar with any results of the testing, the forensic trace analysis testing, on the car that are consistent
with the PETN that the Government claims was found on Mr. McVeigh's clothing?
A. I see no evidence of the presence of PETN in Mr. McVeigh's car if, in fact, Mr. McVeigh had PETN on his right hand, which would have been the reason that it was in his right pocket.
Q. Where in his car would you have expected them to find PETN?
A. There would have been PETN quite likely present on the steering wheel and on any other instruments or any other parts of the car which came into contact with the hand.
Q. The gear shift?
A. Yes, if it was a right-handed one.
Q. The door handle?
A. Yes.
Q. Have you seen any testing by the FBI lab that showed PETN on any of those items?
A. I have not.
Q. Have you reviewed any forensic testing of the fingerprint card that was taken from Mr. McVeigh at the Noble County Jail upon his arrest?

A. Yes.
Q. What was the result of the forensic testing of the fingerprint card of Mr. McVeigh?
A. There was no explosive found on it.
Q. If, in fact, Mr. McVeigh had enough PETN on his hand to contaminate his pants pockets, would you have expected to find PETN on the fingerprint card?
A. I think that is quite possible, yes.
Q. Have you viewed, Dr. Lloyd, any forensic testing of fingernails and hair samples taken from Mr. McVeigh?
A. I recollect fingernail scrapings were taken and tested.
Q. What was the result of those tests?
A. They were negative.
Q. For explosives residue?
A. Yes.
Q. If, in fact, Mr. McVeigh had had PETN on his hands, enough to contaminate his pants pockets, would you have expected to find PETN in the fingernail scrapings?
A. Yes.
Q. Now, you've reviewed the testing, forensic testing, performed on Mr. McVeigh's T-shirts. Is that correct?
A. I have.
Q. What are your conclusions with respect to the testing performed on the T-shirts?
A. I think if one is prepared to ignore the contamination

issues, to ignore the fact that there has been no quantitation done, and that there have been no parameters specified, then I can see that a person taking that point of view could conclude that traces of PETN could have been present.
Q. In England, would you have reported the findings with respect to the T-shirts if you had analyzed them there under these circumstances?
MS. WILKINSON: Objection.
THE COURT: What's the objection?
MS. WILKINSON: Relevance, your Honor, what he would do in -- under another legal system.
THE COURT: Well, does it make any difference whether it would be in England or anywhere else?
MR. TRITICO: I was trying to tie it to where he worked, but I'll ask him if he was working here.
THE COURT: Well, the objection is based on a legal system; and I take that objection as valid.
BY MR. TRITICO:
Q. Would you have reported the findings as a forensic scientist -- would you have reported these findings on the T-shirts under these circumstances? Do you understand my question?
A. I do, yes.
They would not have been reported.
Q. Why?

A. Because of the considerable doubt raised by the considerations that I have just mentioned.
Q. Now, let me talk to you for just a minute, Dr. Lloyd, if I may, about the earplugs. Have you reviewed the testing that was performed upon the earplugs?
A. Yes, I have.
Q. Do you agree with the findings of Special Agent Burmeister with respect to the forensic testing of the earplugs?
A. No.
Q. Why?
A. If I may refer to my note.
I do not accept the presence on the earplugs of PETN.
The results that were obtained were a GCECD, which was a negligible response; and GCECD, in the conditions used, is a technique that is of very little value to the detection of explosives.
There was a very weak GC/Chem response. The GCMS was negative. The LCMS was negative. It is not reasonable that it
could be claimed that this result is consistent with PETN.
Q. What are the earplugs made of?
A. They're made of foam plastic.
Q. Are you familiar with Dr. Robin Hiley's work regarding DNPNT?
A. Yes, I am.

Q. What is that?

A. The full name is dinitrosopentamethylenetetramine.
Q. At some point, would you write that down for Mr. Zuckerman?
A. It's used as an additive in foamed plastics, particularly polyurethane, to cause the plastic to foam.
Q. What findings did Mr. -- Dr. Hiley make with respect to DNPNT and forensic testing?
A. He found that by GC/Chemiluminescence techniques it was confusable with PETN and RDX.
Q. When you say "confusable," what does that mean?
A. That they would give rise to a response that could be mistaken for these explosives, depending on the conditions.
Q. Have you seen anything performed -- any tests performed by the Federal Bureau of Investigation on these earplugs to determine if the PETN they were finding was in fact the result of the earplugs mimicking the PETN?
A. I haven't -- I have seen no tests. It's possible that the GCMS might have picked it up; but if it was present in small amounts, which evidently it was, I think that is perhaps unlikely.
Q. Now, who is Dr. Robin Hiley? We've been talking about him.
A. He is in Linda Jones' laboratory. He's responsible for the research unit there.
Q. In summary, what are your conclusions after you have reviewed all of the testing by the FBI regarding the earplugs?
A. I don't accept the identification of PETN. I also have

reservations over the nitroglycerin and the EGDN identifications.
Q. Okay. With respect to the EGDN, why do you have reservations about that?
A. The three techniques that have been employed are basically measuring the same thing. They are what is known as "correlated techniques."
Q. What does that mean?
A. Perhaps as an example, if I wish to travel to the airport -- hopefully I shall soon be able to do that -- I might buy a map to find the route. And perhaps I might wish to cross-check the route I'm taking, so I suppose I could go and buy another map made by somebody else in a different package and in a different color. But really, this isn't an independent check on my route, because they would both give me the same information.

And this is the situation here: If I wanted an independent advice on how to get to the airport, then I

suppose
I would go and ask somebody who had been there before and who could cross-check the route that I had already chosen.
Q. Now, did you review the lab testing, the FBI lab testing, with respect to Mr. McVeigh's boots?
A. Yes, I did.
Q. And what did you find?
A. That there are no traces of explosives on those boots.

Q. How about ammonium nitrate?
A. One might have supposed that ammonium nitrate prills had been present or ammonium nitrate in some form, given the allegations that have been made.
Q. And were there any found, to your knowledge?
A. No.
Q. Do you find the fact that there was no ammonium nitrate and
no explosives residue on Mr. McVeigh's boots significant?
A. I find it very surprising that anybody could have handled the quantity of ammonium nitrate that has been alleged and not become contaminated even with a single prill or a single particle. I think that is quite remarkable.
Q. Have you examined the boots personally?
A. Yes, I have.
Q. How is the tongue of the boots constructed?
A. It's stitched to the uppers all the way up.
Q. Stitched to the uppers?
A. Yes.
Q. The side of the boot?
A. Yes.
Q. And do you find that significant?
A. It will provide a cavity or a space in which particles could be readily trapped if a spillage of them had occurred.
Q. Now, with respect to all the testing on the clothes, the blue jeans, the T-shirts and the boots, have you seen any

results with respect to fuel oil?
A. No.
Q. And have you seen any testing performed by the FBI lab to -- I'm going to try that one more time.
Have you seen any testing by the FBI lab to determine
the existence, if any, of fuel oil on the T-shirts, the pants, or the boots?
A. No.
Q. Do you find that significant?
A. It is testing that could have been readily applied.
Q. How about nitromethane?
A. That, too, could have been characterized.
Q. You stated a moment ago before I moved on to the boots

that
you did not agree with the finding of nitroglycerin on the earplugs. Can you explain that, please.
A. Similar reasons concerning EGDN. There was a positive GC/Chem result, a weak GCECD response, and a positive GCMS; and
again, all these are related techniques that are measuring basically the same kind of thing like the two maps.
Q. Now, with respect to the clothes and the boots, after everything that you have seen, lab notes that you've received, the testimony that you've seen or read and what you know about the packaging, do you have an opinion as to the scientific integrity of the conclusions drawn by the Federal Bureau of Investigation with respect to those items?

A. I'm afraid I don't accept that they have any scientific integrity.
Q. Now, have you had opportunity to view what's become known as Q507?
A. I have.
Q. Now, you examined it personally, did you not?
A. I did.
Q. Were any crystals on Q507 when you were allowed to examine it?
A. No.
Q. And I take it since there were no crystals, you did not perform any testing on Q507. Is that correct?
A. That is correct.
Q. Would you have liked to have had the opportunity to test the crystals on Q507?
A. I would have been very interested to see them, yes.
Q. Have you been provided a copy of a report prepared by ICI Explosives on some analysis of ammonium nitrate in this case?
A. Yes, I have.
Q. Have you reviewed that report?
A. Yes.
Q. Now, the testing by ICI was on some ammonium nitrate seized
from Mr. Nichols' house; is that right?
A. Yes.
Q. And the control sample was a known ICI prill; is that

right?
A. Yes.
Q. Upon -- after reviewing that testing, was ICI able to isolate the prills from Mr. Nichols' house as having come from ICI Explosives?
MS. WILKINSON: Objection, your Honor. It isn't ICI who issued the finding. It's Agent Burmeister.
THE COURT: Do you accept that correction?
MR. TRITICO: Well, as I read the report, I think it

MR. TRITICO: Well, as I read the report, I think it came from ICI, also.

THE COURT: Well, my understanding from Mr. Burmeister's testimony was that he went there and participated.

MR. TRITICO: Okay. I'll go along with that.

BY MR. TRITICO:

Q. Mr. Burmeister's finding is that the prills could not be solely identified ICI prills. Is that correct?

A. That is correct. They could not be solely identified as ICI prills.

Q. And why is that?

A. Because there were certainly two other manufacturers in which substances were present that were confusable with the ICI prills.

Q. What, in Mr. Burmeister's analysis of the crystal off of Q507 -- Is your understanding that ICI did not test the

crystals off of Q507? Is that correct?

A. That is my understanding.

Q. And Special Agent Burmeister did; right?

A. Yes.

Q. What was his findings on the crystal with respect to the compounds present in the crystal? Do you recall?

A. I do. Mr. Burmeister concluded there was present aluminium, sulfur and silicon.

Q. Are those compounds -- what is that? Is that compounds you can find in nature?

A. They are chemical elements which are very common in nature.

Q. Have you from reviewing the report from ICI -- have you been able to determine if those compounds are consistent with or in ICI prills?

A. They are in ICI prills, yes.

Q. Are they in other prills?

A. They are in other prills, too.

Q. What have you found to be the coating on an ICI Joplin prill?

A. This appears to be magnesium silicate. Talc.

Q. And you call that magnesium silicate?

A. Yes.

Q. Now, you heard the testimony of Special Agent Burmeister that the testing he did would only go down to an atomic level of 11. Am I saying that correctly?

A. An atomic number of 11, yes.

Q. What is the atomic number of magnesium silicate?

A. Of magnesium, the atomic number is 12.

Q. That's higher than 11?

A. Yes.
Q. If magnesium was present on the crystal that Special Agent Burmeister extracted from Q507, would you have expected to find
that on this test?
A. That obviously depends on how much there was of it, but it is more likely than not that he would have picked it up.
Q. Are the other items that he picked up off of the crystal from Q507 the same type of things that you would find on coating or an interior additive to an ammonium nitrate prill?
A. Yes.
Q. Do you find it significant that he did not find magnesium on the crystal that he extracted from Q507?
A. I think some significance must be attached to it. ICI material did contain magnesium; and as we've pointed out, there
was none on the crystals from Q507.
Q. Based on the findings that you've seen, the testing done by
Special Agent Burmeister, and the report from ICI, do you have an opinion as to whether or not the crystals from -- extracted from Q507 came from ICI Joplin ammonium nitrate prills?
A. It's impossible to say.
Q. Now, when you -- when you examined Q507 and looked at it

personally, did you find any evidence of scorching or burning or charring or something like that?
A. It appeared to me the surface had been scorched.
Q. And at what temperature would you expect wood to scorch?
A. Around 250 centigrade, some 500 Fahrenheit, in that order.
Q. And at what temperature does ammonium nitrate vaporize?
A. Around 200 degrees centigrade.
MR. TRITICO: May I have a moment, Judge?
THE COURT: Yes.
BY MR. TRITICO:
Q. Finally, Dr. Lloyd, based on everything that you've seen, read or heard in this case, do you have an opinion as to the quality of the forensic testing performed by the FBI in this case?
A. I have been very -- I have been very surprised at the -- I'm afraid what seems to me the inadequacy of it.
MR. TRITICO: I thank you very much, sir.
Pass the witness.
THE COURT: Ms. Wilkinson.

CROSS-EXAMINATION

BY MS. WILKINSON:
Q. Good afternoon, Dr. Lloyd.
A. Good afternoon.
Q. As Mr. Tritico would say, we've never had the pleasure of speaking, have we?

A. I believe we have met last December.
Q. We've never talked about the case, have we?
A. That is correct.
Q. When did you start working for the defense on this case?
A. Last December.
Q. Meaning December of 1996?
A. I think it would be about September.
Q. September. I'm sorry. So about nine months ago?
A. Yes.
Q. And how much have you gotten paid to this point?
A. I don't know. I haven't worked it out yet. I haven't claimed yet.
Q. What's your fee?
A. My fees -- I believe it's $125, $150 an hour.
Q. Approximately how many hours have you put in to date?
A. Without checking my records, I can't tell you precisely; but a few hundred.
Q. So you're getting paid quite a bit of money to come in and testify today; correct?
MR. TRITICO: I'll object. That's argumentative and badgering.
THE COURT: Well, "quite a bit of money" is not very scientific.
BY MS. WILKINSON:
Q. Dr. Lloyd, you said a couple hundred hours; correct?

A. Possibly that order. I really haven't come to the figures.
Q. Could you take a moment and do that, please.
A. I'm sorry. My records are at home.
Q. Would it be fair to say you've spent over 200 hours on this
case?
A. Yes, it would.
Q. At $125 an hour; correct?
A. I think that's the figure, yes.
Q. And since you left the forensic home office in Great Britain, you have always testified for the defense; is that correct? Since you left the --
A. In criminal cases, yes.
Q. And you've always been paid to testify that there was always a possibility of contamination; correct?
A. No.
Q. Well, if I had your transcripts from prior testimony, I could rely on those transcripts as accurate; correct?
A. That depends upon which cases you were taking them from. I've worked on very many cases.
Q. Well, you testified under oath in those cases, didn't you?
A. Yes, of course, I did.
Q. And so I could rely on the principles that you discussed in
there about explosive trace analysis as fair and accurate; correct?

correct?
A. Yes.

Q. And in every one of those cases, you've testified that there is always a possibility of contamination; correct?

MR. TRITICO: Excuse me, your Honor. I'm going to object that this is improper impeachment, because she hasn't told him what cases she's talking about.

MS. WILKINSON: I can talk about a specific case, your Honor.

THE COURT: All right. But I understood your question to be in all testimony.

MS. WILKINSON: That's true.

THE COURT: That question is not objected to -- should not be objected to. If it is, it's overruled.

BY MS. WILKINSON:

Q. Dr. Lloyd, in criminal cases that you've worked on since you left the home office in 1991, haven't you always testified there is always a possibility of contamination?

A. No. That is nonsense.

Q. Okay. Let's talk about Regina vs. Sean McNulty, back in 1994. Do you recall that case?

A. I do recall it, yes.

Q. Didn't you testify in that case that there is always a possibility of contamination?

A. I did.

Q. And in fact, you testified that even when Ms. Jones, who was the expert on the other side in that case, took extensive

measures to avoid contamination using the booties that you've described that I think are appropriate and other things that that was not sufficient to avoid contamination; correct?

A. Perhaps I might point out that this case is now the subject of an appeal. Based --

Q. I would appreciate it if you'd just answer the question.

MR. TRITICO: I'm going to object. He was attempting to answer the question.

THE COURT: No, he's answering a different question. The question is what his testimony was.

Please answer that question.

THE WITNESS: My testimony was that contamination was an issue.

BY MS. WILKINSON:

Q. And it was an issue despite the fact that the experts in that case and the police had taken into account or followed the

procedures that you've described here for the jury today;
correct?
A. Not entirely, no. They had not entirely followed those
procedures.
Q. Well, they had taken control swabs, hadn't they?
A. In some cases, they had.
Q. And they had worn Tyvex protective suits?
A. No. In some -- in the investigation, they were half
naked,
which was -- it was hot weather, and most of them had
discarded

their protective clothing. It was really most objectionable.
Q. And did you raise that in your testimony?
A. Yes.
Q. If I showed you your transcript, could you find it?
A. It was -- it was raised by the barristers in the
cross-examination and in the examination of Ms. Jones.
Q. No, I'm talking about your testimony, not Ms. Jones'
testimony.
A. It was raised in the case. I mean --
Q. But you didn't testify to it, did you?
A. I probably didn't testify to the way they were not wearing
their protective garments. I can't really remember.
Q. And you testified that the laboratory took control
samples;
right? They do background samples over at Ms. Jones'
laboratory?
A. They do, yes.
Q. And they wear the protective suits; correct?
A. Quite correct, yes.
Q. And they wear the protective boots?
A. Yes, they do.
Q. And you said despite that, there was still the chance of
contamination; correct?
A. The chances of contamination in that case were the chances
of contamination arising at the scene itself and because the
police officers concerned had visited both the scene and the

houses where Mr. McNulty had been.
Q. You weren't willing to eliminate the chance of
contamination even at the laboratory, were you?
A. No, that can't be eliminated, because on occasion, we do
find that it does occur.
Q. So the possibility again exists no matter what one does to
try and eliminate the chances of the contamination, right?
The
possibility.
A. I quite agree.
Q. Now, you've also said, haven't you, that just because you

don't find certain residues at a scene doesn't mean they're not
there? Correct?
A. Yes. One doesn't necessarily detect residues. They can be
missed.
Q. And there is multiple reasons for that; right?
A. There could be.
Q. You might not have searched or swabbed the correct area?
A. That is a possibility, yes.
Q. Or they may not have used the appropriate swabbing or
collection technique to collect that type of residue; correct?
A. That is right.
Q. So if there is a finding that there is no residue in
Mr. McVeigh's car, that doesn't mean there weren't residues
there; correct?
A. The possibility that there were residues there that were

not detected does remain. I would be surprised, though --
Q. I'm just asking you whether -- residues could still be
there even if they weren't detected?
A. I mean, it seems to me something of a contradiction. I
would accept that -- I mean mistakes can be made and that the
searching might be inefficient, which could result in items not
being seen. I can accept that; but I think it's not very --
not very possible given the circumstances of the case when one
might expect to see a substantial contamination.
Q. So are you saying, then, Agent Burmeister and his
colleagues did a good job collecting samples for residues?
A. I have no idea. I would accept that they were experienced
and would have done an adequate job in searching that
particular car, so far as I know. I haven't seen any full
details of it.
Q. So you're telling us now, unlike what you said on direct,
that the FBI did a good job in collecting the residues and you
assume because you know Agent Burmeister; correct?
A. I have met him briefly.
Q. And you have no doubt about his professionalism, do you?
A. I'm not able really to comment on that. I can only comment
on Mr. Burmeister so far as I'm acquainted with his results and
conclusions.
Q. Well, you reviewed his work in other cases, haven't you?
A. I have in the World Trade Center, yes.

Q. And you didn't raise any issues there, did you?
A. I did raise issues. It was rather unclear in that case who
was responsible for the chemistry in it, and some of it was

was responsible for the chemistry in it, and some of it was inadequate; but who was responsible for it is not really clear from the --
Q. Well, you didn't testify to that, did you, Dr. Lloyd?
A. I didn't testify in that case, no.
Q. And today you're telling us that you believe the FBI did a sufficient job collecting residues in the car to determine whether they were actually present. Is that what you're saying?
A. I don't know whether they did a sufficient job or not. I think they may well have done. I mean you're asking me to comment on something that is not fully accessible to me.
Q. So you just don't know, do you?
A. Well, I'm prepared to accept that they did a reasonable job
when they searched the car. I'm --
Q. So there is --
MR. TRITICO: Excuse me --
THE COURT: Let him finish his answer.
MS. WILKINSON: Excuse me.
BY MS. WILKINSON:
Q. Go ahead, Dr. Lloyd.
A. It has been put to me in this case that Mr. McVeigh handled
large quantities of ammonium nitrate and he was contaminated

with PETN. I would expect under those circumstances, if that is correct, that these materials would be present in his car in
very substantial amounts, particularly the ammonium nitrate; yet not one single prill of that material has been found. I would imagine that Mr. Burmeister would know what an ammonium nitrate prill looks like, and I would imagine he would have searched carefully for it.
Q. And you reviewed his testimony and saw that he said that he
searched for those prills in the car and didn't see them; correct?
A. Yes.
Q. So what you're saying is that he did a sufficient or acceptable job in collecting residues or looking for these residues in this case; correct?
A. Well, presumably.
Q. With the data that you have?
A. Yes.
Q. Now, would it change your testimony if you found out that Mr. McVeigh's car was left in Oklahoma City and he didn't get into that car until after he detonated the explosive device?
MR. TRITICO: Excuse me, your Honor. I'm going to object to that as totally outside the record of any evidence in
this case, and I object to it.
THE COURT: Overruled. This is hypothetical, you understand.

understand.

THE WITNESS: Yes.
THE COURT: All right.
THE WITNESS: If he had been involved in constructing this device, he would have been contaminated with ammonium nitrate prills, if that is the allegation against him. If he had then got into another car, the Mercury car, then he would have transferred ammonium nitrate to that.
BY MS. WILKINSON:
Q. Well, that's not the hypothetical, Dr. Lloyd.
A. I understood you were telling me that after he had parked the Ryder truck, he got into the Mercury car.
Q. Well, let's assume he built the bomb the day before April 19, on April 18. Okay?
A. Yes.
Q. And you don't know what boots he was wearing when he built that bomb, do you?
A. I do not.
Q. So he could have been wearing different shoes, couldn't he?
A. That is a possibility.
Q. And you don't know whether -- after he constructed the device and dealt with the ammonium nitrate, whether he washed his hands, do you?
A. I don't.
Q. And if he washed his hands, ammonium nitrate is porous and soluble, it easily would have washed away?

A. He would have removed it from his hands, yes.
Q. So there is a great chance that if he built the device on April 18, washed his hands or changed his boots or did a variety of things and then got into the Ryder truck and drove it to the Murrah Building that he wouldn't have residue on his hands or on his boots; correct?
A. If he changed his boots and washed his hands, there would be no -- clearly no ammonium nitrate upon those.
Q. So based on those facts, you wouldn't be so surprised that there wasn't any finding of ammonium nitrate prills on his boots -- correct -- if you would take those assumptions --
A. Yes.
Q. -- as correct?
And you wouldn't be surprised to find out that there was no PETN on the steering wheel; correct?
A. I think PETN is a rather different matter from ammonium nitrate.
Q. Well, haven't you testified in previous cases -- in fact, a case I just mentioned, Regina vs. Sean McNulty -- if someone were to wash their hands, powdery substance of PETN would wash

away, on page 44 of your transcript?
A. I don't recall the circumstances of that testimony.
Q. Well, would you like to see your testimony to refresh your recollection?
A. Yes, I would like to, please.

Q. Does that refresh your recollection, Dr. Lloyd?
A. I beg your pardon. I'm only a short way through it.
MR. TRITICO: Your Honor, I don't know what's been provided him, but I don't know if he needs more than what she's given him to review.
THE COURT: Well, he can speak for himself, I'm sure, if he does.
MS. WILKINSON: Your Honor, perhaps I could help by pointing to the question.
THE COURT: All right.
BY MS. WILKINSON:
Q. I believe it ends with, "Does rain wash away traces of either RDX or PETN?" Do you see that, Dr. Lloyd?
A. No, I haven't found that yet.
That's on page 44, perhaps? At what point?
THE COURT: Are there line numbers in this?
MS. WILKINSON: There aren't, your Honor. Not in these transcripts.
THE WITNESS: This does seem to me quite irrelevant.
BY MS. WILKINSON:
Q. Dr. Lloyd, if you could stick with the question. Did you testify in a previous case that PETN residues could wash away fairly readily?
A. Yes. This seems to be referring to the effect of a fire brigade spraying --

Q. Dr. Lloyd, please, if you could just answer the question, which I think you did. You said yes?
MR. TRITICO: I'm going to object. I believe he was trying to answer the question.
THE COURT: Well, he's talking about other parts of it. The question is very specific.
You can repeat it.
BY MS. WILKINSON:
Q. Did you testify that PETN residues, especially in a powdery form, could wash away fairly readily?
A. Yes.
Q. Thank you.
MS. WILKINSON: Could I retrieve the documents so Mr. Tritico can see?
THE COURT: Yes.

BY MS. WILKINSON:
Q. Dr. Lloyd, you're not changing your testimony today, are you, that PETN wouldn't wash away?
A. Not one jot.
Q. Pardon?
A. Not one jot.
Q. So you wouldn't be surprised if Mr. McVeigh had handled detonation cord and had gotten that fine, powdery PETN on his hands, washed his hands, and didn't get into the Mercury until the next day that he wouldn't leave any PETN residue on the

steering wheel; correct?
A. I think he would have left residue, and perhaps you might allow me to explain my answer to the last question.
Q. Sure. Go ahead.
A. The piece -- the document you have shown me was referring to the loose deposition of PETN on a surface, a metal surface. And of course, powdery PETN under those circumstances is very readily washed away.
But when PETN becomes adsorbed on the skin's surface, which is I think the point that we are concerned with here, those residues are very persistent indeed. It's possible to pick up a PETN adsorbed on skin surface for days afterwards. That is a well-established experimental fact.
Q. Dr. Lloyd, didn't you also testify that PETN would be removed by the force of water from a hose?
A. Clearly, but not applied to somebody's hands.
Q. So if it was absorbed into the skin, it would be retained in the skin; correct?
A. It's available on the skin surface -- it is strongly retained on the skin surface. But I mean, this does become available for transfer to something grasped like a steering while.
Q. So Dr. Lloyd, you're trying to have it both ways, aren't you?
A. I am not.

Q. You're saying it's absorbed into the skin; therefore, it will stay, but it's on top of the skin enough to transfer readily to the steering wheel. That's what you're telling this
jury?
A. This is experimentally demonstrated that a person contaminated by PETN on the skin surfaces can contaminate a steering wheel. I've done it. I've demonstrated it.
Q. And doesn't it depend on the quantity of PETN and whether the person has washed their hands and how long that PETN has been on the person's skin?
A. It does depend on those factors, of course.
Q. So you wouldn't be surprised if Mr. McVeigh had handled PETN but not left residue in the vehicle; correct?

PETN but not left residue in the vehicle, correct?
A. I beg your pardon?
Q. You wouldn't be surprised if he did not leave residue on the vehicle. You wouldn't be surprised if he did, but you wouldn't be surprised if he didn't -- correct -- depending on all of those circumstances?
A. Yes. There is a probability that there would be some remaining on the steering wheel. One can't specify what those probabilities are, but certainly the event could occur.
Q. And it could just as easily not occur.
A. Yes.
Q. And you don't have any information about whether Mr. McVeigh in this hypothetical changed his shoes or whether

he washed his hands or took a shower, do you?
A. I have no such information.
Q. And that could affect your conclusions in this case, could it not?
A. It could do.
Q. Clearly could affect them as to the ammonium nitrate -- correct -- because of the solubility of ammonium nitrate?
A. Yes.
Q. Now, you talked quite extensively on direct examination about quantitative analysis of explosives, and I don't want to get into too much detail of that. But quantitative analysis of explosives residue or trace amounts is only of limited benefit, is it not?
A. I don't accept that at all.
Q. You don't. So if someone were to test one corner of a jacket and find a certain quantity of residues, these nanograms that you've been talking about, and then tested an entire jacket, the quantitative analysis would be quite different, wouldn't it, if you're comparing two different surfaces?
A. Yes.
Q. And size of surfaces?
A. Yes, of course.
Q. So if you found 10 nanograms of PETN on my collar, in a small area, that would tell you something quite different than if you found it all over my jacket; correct?

A. It could do.
Q. So qualitative (sic) analysis of the amount of explosives doesn't tell you when the explosives was placed there, does it?
A. No, it doesn't tell you when it was placed there; but at least it provides you with some guide.
Q. It doesn't tell you how long it's been there, does it?
A. If the contamination of the garment was substantial, then

one might infer it was the consequence of a recent contact.
Q. But these are all relative concepts -- correct -- the quantitative analysis? It's not exact numerical comparison but
kind of the relative comparison of relatively large amounts with relatively small amounts; correct?
A. It is a comparison between amounts relative to one another,
yes.
Q. So in this case, when Agent Burmeister found relatively large amounts of PETN on the shirts, that tells you something about the amount of PETN that Mr. McVeigh came in contact with;
correct?
A. I don't know what amounts he found on the shirts.
Q. Well, you've reviewed all the tests that he conducted; correct?
A. I have.
Q. And all of the machines despite their varying sensitivities
found PETN on the shirts; correct?
A. May I just refer to my notes?

Q. Sure.
A. I think it depends really upon what you mean by "found." Some of these results would be open to challenge, I should have
thought. But yes, in general, there was a detection of PETN on
these garments.
Q. And in sufficient amount so that this amount could be seen by various machines. I mean, common sense tells you if you have a sample and it's very small, it can be used up by one machine -- correct -- and you might not detect it by the next machine, but that doesn't mean it wasn't there? Correct?
A. Yes. Well, let's suppose that the sensitivity of each machine was 1 nanogram and we have 1, 2, 3, 4, 5, 6, 7 detections of PETN, each of them 1 nanogram, 7 nanograms in total. That is really a rather small amount, particularly if you're suggesting that the person concerned has been cutting detonation cord.
Q. Well, you don't know how much of that PETN powder got on the person to begin with, do you?
A. No, but one --
Q. One could speculate?
A. One would expect that the quantities would be very much more than 7 nanograms -- very, very much more.
Q. And what is that based on, Dr. Lloyd? What kind of scientific study do you have to show that?
A. Examination of military personnel who have been cutting

detonation cord.
Q. And you have a study that shows how much of that PETN powdery substance was on those military personnel?
A. Yes.
Q. That's been documented?
A. It has been documented some years ago, yes.
Q. What's the name of the study?
A. It was published in 1983. I think it was -- the results were presented in the Quantico results.
Q. In the what results?
A. No, I beg your pardon. The results of particular relevance -- there are some results at Quantico which were reported on the levels of PETN and other explosives found on military personnel. The particular example which I have in mind here is the case of a laboratory colleague who attended a military establishment in which PETN cord had been used, and he
was contaminated as a consequence for six weeks afterwards. And he was cons -- he was contaminated with microgram amounts.
Q. Now, are you saying the study was presented in Quantico in 1983?
A. No. This particular one concerning my colleague was not presented at Quantico. It was presented in an internal report.
Q. So it's never been published?
A. That is right.
Q. So it's had no peer review; correct?

A. That is correct, yes.
Q. Now, there is another study of PETN and its availability in
public places, isn't there? You discussed it with Mr. Tritico during your direct examination.
A. That is right.
Q. And that was by Dr. Hiley?
A. Yes.
Q. Who you recognized as an authority in this area; correct?
A. Yes.
Q. And you misstated his conclusions, didn't you?
A. I apologize if I did.
Q. I think you said that there was PETN found in police stations through his study; correct?
A. Yes, I did. Now you remind me. I believe that was in a police vehicle, was it not?
Q. And that was the only finding of PETN based on all the sampling they did in public places, vehicles, buildings, and other public areas. Correct?
A. Yes.
Q. And didn't they conclude that based on that study that the presence of PETN in public -- in a public environment was very rare?
A. So far as the English environment is concerned, yes.
Q. And isn't that the only known study you know of of the

Q. And isn't that the only known study you know of of the availability or likelihood of finding PETN residues in public

places?
A. Yes.
Q. That has been subject to peer review; correct?
A. Yes.
Q. Now, PETN doesn't have the same qualities as nitroglycerin and EGDN, does it?
A. That is correct.
Q. And PETN does not transfer through cardboard boxes, paper bags, and onto clothing; correct?
A. That would depend upon how well the containing -- the containers were sealed.
Q. Dr. Lloyd, are you aware of any studies that show PETN migrating through cardboard boxes and paper bags?
A. No.
Q. So you have no evidence of that, do you?
A. That is correct.
Q. And in fact, the chemical or physical properties of PETN show just the contrary, don't they? It's a hard, sticky substance?
A. That is not correct. It depends upon the source of the PETN. If it's from a plastic explosive such as Semtex, then this is a sticky material and persists in that form.
If the PETN is from detonating cord, it is a finely divided material which does spread very readily between items and is transported as very small particles.

Q. So if you had that powdery substance in the laboratory, it would be easy to wipe away, wouldn't it, especially on the surface of a bench or a metal surface as you've described? Correct?
A. Yes, it would be -- well, I don't think it would be easy to
completely wipe away, because you must remember we're dealing with such vanishingly small quantities of material that if you attempt to wipe a surface free of an explosive, there is going to be some left in crevices and so forth.
Q. But, Dr. Lloyd, you're telling us this is different from a sticky substance that's in Semtex. You're saying it's the powdery form?
A. That's correct.
Q. That's easy to get on yourself if you're cutting detonation
cord; correct?
A. Yes.
Q. And therefore easy to wipe off a hard surface; correct?
A. Well, it's easy to wipe the bulk off a hard surface, but it
would be very difficult to completely remove it from a

would be very desirable to completely remove PETN from a surface.
You'd really need to use chemical cleaning to totally eliminate
it.
Q. So if Agent Burmeister washed his table with solvents and cleaning solvents, that should be sufficient to wipe away any chance of that powdery PETN being on his table; correct?
A. Yes, if it was efficiently cleaned in that way. Yes.

Q. And are you aware that he did that in this case?
A. I understand that he did, yes.
Q. And you believe that's a sufficient or reasonable procedure
to take to avoid contamination; right?
A. Yes, so far as the surfaces upon which he would operate; yes.
Q. And it's also reasonable to put down that disposable butcher paper on the tables; correct?
A. It is.
Q. And if you follow the hypothetical that Mr. Tritico gave you about Mr. Mills' placing down that disposable paper and placing the box on it, you believe that the box could actually have contaminated the disposable paper. Correct?
A. Yes, I do. Yes, I heard Mr. Mills in evidence state that he placed the box upon the table.
Q. Now, when you say that, are you assuming that the PETN that
you think theoretically on the floor is sticky and therefore grabbed the cardboard box, then got on the table and then stuck
to the butcher paper? Is that what you're telling the jury?
A. No, I'm not suggesting that it was necessarily sticky material. It would have been picked up on the box just like any other dust-like material could have been picked up.
Q. So you believe it could be this powdery substance?
A. A few particles of it, yes.
Q. And if it got on that disposable paper and Mr. Mills threw

that paper away before he handled the next piece of evidence, wouldn't be it unlikely that there would be contamination of the remaining evidence that he was looking at?
A. That is right; though to me, it didn't seem clear that that
was the procedure that he followed.
Q. Well, were you here for Mr. Mills' testimony?
A. I was.
Q. And did you hear him say that he switched the butcher paper?
A. I did. But he put the box on the table on top of the new butcher tape -- excuse me -- on top of the new butcher paper,

as I understand it, prior to his emptying the box onto the fresh butcher paper.
Q. You objected during Mr. Tritico's examination to Mr. Mills' taking those pieces of Mr. McVeigh's clothing out of the paper bags and putting them into individually sealed plastic bags, didn't you?
A. I did.
Q. And wouldn't you agree that it's better for that evidence to be in plastic bags that would protect it from any kind of contamination?
A. Well, the plastic bags wouldn't have protected it from contamination.
Q. From PETN?
A. It would have protected it from PETN, from any

subsequent --
Q. Well, those are the residues that we're talking about on the shirts and the pants; correct?
A. We are talking about nitroglycerine, too.
Q. We're focusing -- because we've explained that nitroglycerine can come from other sources, we're focusing on the PETN; correct?
A. Yes.
Q. And you're not aware of any reason or any research or studies that show that PETN migrates through plastic bags, are you?
A. That is correct.
Q. And if that clothing was seized from Mr. McVeigh at the time of his arrest before anyone knew his connection to the bombing, it wouldn't be unreasonable for the Noble County Jail folks to put those clothes in a paper bag, would it?
A. It might be considered by them reasonable to put it in a paper bag. It's not a reasonable way for handling evidence.
Q. Well, they didn't know it was evidence at the time, did they?
A. They did not.
Q. So when the FBI lab got the materials back and they put them in the plastic bag, isn't that consistent with what you recommend as the best way to store evidence that may have explosive residue on it?

A. It seems to me to be just too late. I suppose that's perhaps the best thing that could be done; but I understand it was a normal, standard practice.
Q. Well, it's "too late." You're not aware of any information that shows there was any actual contact with high explosives at the Noble County Jail, are you?

A. I'm not aware of any contact, no.
Q. Quite the contrary. You heard the testimony in this case about the lack of contact; correct?
A. I don't think you can make that assumption, because it's equivalent to basing the whole of the detection of explosives traces on conjecture and speculation that contamination could not occur. That is not a matter which should be left to speculation. It's far too important. It should be demonstrated as far as possible experimentally by appropriate monitoring procedures that contamination is not an issue. You cannot assume that contamination could not have occurred and assume that as a basis for your results. It is not adequate.
Q. Well, checking with the officials and reviewing records to see whether there had been any high explosives in the area would be a reasonable step, wouldn't it?
A. It might be of some help, but I don't really think it's the
answer to the problem.
Q. So there is no way, then, to eliminate the chance of contamination for you, is there?

A. Contamination can never be totally eliminated. I agree with that.
Q. I want to ask you a few questions about the testing on the clothes; and you told, I believe, Mr. Tritico that the three different tests that were done on the shirts were not different
techniques. Is that correct?
A. They're different techniques, but they are dependent on essentially the same characteristics of the substances that were detected.
Q. Are you familiar with this fancy word that Dr. Whitehurst and Mr. Burmeister have used called "orthogonal techniques"?
A. Yes, I am.
Q. And aren't these techniques orthogonal?
A. They're not.
Q. It's your testimony that the GC/Chem and the GCECD and the MSCI are all the same based on the same scientific principle?
A. In many respects, they are, yes.
Q. In all respects?
A. In respects of the GC, they are. In terms of the detectors, they're not. But the problem is that the detectors,
although they are different, are responding to the same characteristic of the substance that is being detected. They're detecting a nitrate ester, for example.
Q. Well, isn't the detector what gives you the identification,
not the gas chromatography, which just gives you the retention

time? Correct?

time. Correct?
A. I think both factors are important.
Q. Which one is more important, Dr. Lloyd? Isn't it the detector and not the retention time?
A. That is incorrect. The detector -- for example, the mass spectrometer: You're saying that it is more important or more specific. It is not, because the mass spectrum of nitroglycerin of EGDN and of PETN are all the same. So in that
case, it is clearly the gas chromatography which is important to controlling specificity of the technique.
Q. Let's turn finally to Q507. You said you examined it and saw no crystals; correct?
A. That is correct.
Q. Isn't it true that you just requested to examine Q507 shortly before the trial started?
A. That is correct. Well, I requested to see it some time ago, but it only became available or practical --
Q. You weren't here in the United States; correct?
A. Pardon?
Q. You weren't here in the United States. You didn't make yourself available to test it or look at it until recently; correct?
A. I don't think that's a fair way of putting it at all. I had requested to see it some time ago but; for various reasons of practicality, I was only able to see it a few weeks ago.

That is right.
Q. And you said that when Mr. Burmeister identified some of the substances that were on Q507, the crystals and those elements that we've identified, that there were two substances that he could have been confusing. Is that correct?
A. I think we were talking about different products of ammonium nitrate prills.
Q. Were you talking about the prills that came from Mr. Nichols' house?
A. I was talking about the prills listed by the ICI. And there are three -- three types of prills which would not have been distinguishable as far as Q507 was concerned.
Q. All right. Well, let's leave Q507 and go to the prills at Mr. Nichols' house. You said that you believe that Mr. Burmeister could not identify those prills as being ICI prills; correct?
A. Yes.
Q. And are you familiar with the formula for the ICI prill in 1994 from the Joplin, Missouri, plant?
A. I've been shown a tabulation.
Q. And is it your testimony that that is not a unique formula?
A. It is not unique so far as the particular elements are concerned.
Q. Including the coating and the additives; is that what you're saying?

A. That's right. For example, one of the other prills contains Kaolin. Well, this would be confusable with talc.
Q. So you're saying Agent Burmeister could not identify those elements as being consistent with the recipe for the ICI prills; is that correct?
A. So far as Q507 is concerned.
Q. I'm not talking about Q507. I'm sorry. I'm talking about the prills at Mr. Nichols' house where we have the full prill, the coating and the additive.
A. I would need to remind myself of the contents of the ICI table.
Q. Okay. So there is a difference, then. When Agent Burmeister testified, he could identify the prills, but all he could say about Q507 was that the other elements were consistent with ICI. And you wouldn't disagree with that, would you?
A. I would agree that they could -- yes, they could be consistent with ICI prills.
Q. And that's all he said in his testimony; correct?
A. I don't recall his precise words.
Q. Well, you reviewed his testimony, didn't you?
A. I did, yes.
Q. And the other elements that you said should be there, the magnesium, would only be present if the coating was present on Q507; correct? The magnesium is not present in the additive,

is it?
A. I do remember in Mr. Burmeister's testimony that he did refer to the coating of the prills and the elements that were present in it.
Q. On Q507?
A. Yes.
Q. Well, let's assume that Agent Burmeister distinguished for the jury between the crystals, saying there were certain elements present that were consistent with the additive and not
with the coating because he didn't find the magnesium. Would you agree with that?
A. I beg your pardon?
Q. If Agent Burmeister testified that he found elements which were consistent with the additive -- that is, the element that's added inside the prill -- but didn't find the magnesium which you would find if you had the coating, that he can just say that Q507 is consistent with the ICI prill formula?
A. But he did find silicon, and silicon is associated with the
magnesium, or one might have expected it to have been, so that if silicon was present and the prill was from ICI, one would have expected to see magnesium as well, because one would infer

from that --
Q. Even if those crystals were embodied in Q507 after an explosion of ammonium nitrate prills?
A. I have some difficulty in following how it is now described

as being "embedded," because when I referred to Mr. Burmeister's notes, the crystals were referred to as a glaze. There was --
Q. You're saying in his notes on Q507 it wasn't referred to as embedded?
A. It was referred to as a glaze.
Q. Do you recall where that was in his notes?
A. I've got the page here, if you care to see it.
MS. WILKINSON: Your Honor, may I?
THE COURT: Yes.
MS. WILKINSON: Your Honor, may I have a moment, please?
THE COURT: Yes, certainly.
BY MS. WILKINSON:
Q. Dr. Lloyd, did you examine the photographs that Agent Burmeister took of Q507?
A. I did.
Q. And were you able to determine from those photographs whether the crystals were embedded in the piece?
A. So far as I could determine, the crystals were not embedded; but it was rather difficult to distinguish them on the photographs.
Q. And if they had been a glaze on them, how would they have stayed on the piece?
A. Well, they would have stuck to the surface.

Q. And you could tell that from looking at the photograph?
A. Well, they were clearly on selected areas of the surface, yes.
Q. But you couldn't tell whether they were actually embedded into the plywood, could you?
A. Well, if they were embedded, they wouldn't have been easy to see.
Q. Are you saying, then, that Mr. Burmeister couldn't have seen them through the microscope?
A. Well, clearly, he saw them, yes.
Q. So if he testified that he saw them embedded into portions of the plywood that had been blown apart, you wouldn't quarrel with that, would you?
A. I don't know. It seems to me a contradiction of his notes, so really I -- I can't comment any further on that.
Q. Well, let's go back to how the crystals got there. Let's assume that it was a glaze of crystals. Is it consistent with

assume that it was a glaze of crystals. Is it consistent with an explosive device made of ammonium nitrate prills to find those crystals on a portion of the Ryder truck?
A. Is it consistent? No, it is not consistent. It's quite a unique observation. And whether it is characteristic of the alleged explosion or of any other effect, we can't tell. I mean, if it's going to be used as evidence of an ammonium nitrate bomb and that the thing is absolutely unique, which I think is agreed, then one would require to see experiments to

show that this was in fact a reproducible phenomenon.
Q. Doctor, I wasn't asking you if it's unique. I'm asking you
if it's consistent with an explosion.
A. I have no idea. It's impossible to say.
Q. So you don't agree that the finding of the elements and the
crystals is consistent with those ammonium nitrate crystals coming from a prill?
A. I don't agree.
Q. So you don't think they got there -- there is no way they got there from an explosion. Is that correct?
A. It's impossible to know. There are too many inconsistencies.
Q. Well, you're either saying it's impossible, or it is possible.
A. I'm saying I don't know. It's not possible to say.
Q. So you can't eliminate the possibility that those crystals came there from an explosion, can you?
A. I cannot eliminate the possibility.
Q. Dr. Lloyd, you would not be surprised to find out that Agent Burmeister and others did not find high-explosive residue
at the crime scene, would you?
A. It is not surprising that no residue was found.
Q. And in your experience, it's often typical in these type of
cases that no high-explosive residues are found at the bombing crime scene; correct?

A. Particularly with large explosions, yes.
Q. But despite that, it's still consistent with Mr. McVeigh having built or had contact with explosives components to find PETN on his clothing; correct?
MR. TRITICO: Your Honor, I'll object to the form of that question.
THE COURT: Sustained.
BY MS. WILKINSON:
Q. Is it consistent, Dr. Lloyd, with Mr. McVeigh being in contact with explosives to find PETN on his clothing?
A. No.

MR. TRITICO: Object to the form of that question, also.
THE WITNESS: No.
THE COURT: Well, the objection is overruled. The answer stands.
BY MS. WILKINSON:
Q. It's not consistent with?
A. Because there are so many other -- there are other possible
sources. I understand, for example, that he was involved in the sale of surplus military equipment. As I have pointed out to you, military personnel and their attachments and belongings
are subject to very high levels of contamination with PETN. I mean, there is no way, it seems to me, of excluding that possibility for the PETN on his clothing.

Q. There is really no way of excluding any possibility, is

there, Dr. Lloyd?
A. That is correct.
MS. WILKINSON: No further questions.
THE COURT: Redirect.
MR. TRITICO: Yes, your Honor.
May I approach, Judge?
THE COURT: Yes.
REDIRECT EXAMINATION
BY MR. TRITICO:
Q. Dr. Lloyd, you've been handed what's been marked for identification purposes as McVeigh Exhibit J317. Do you have that?
A. Yes, I do.
Q. And is this the note from Special Agent Burmeister's collection of notes that you were referring to regarding the glaze of crystals on Q507?
A. That's correct.
Q. Is this the note that you relied upon in reaching your conclusion that it was a glaze instead of them being embedded?
A. Yes. Well, I took it that this was what Mr. Burmeister had
observed.
MR. TRITICO: I'll offer McVeigh Exhibit J317, your Honor.
MS. WILKINSON: No objection, your Honor.

THE COURT: Received, J317.
Do you wish to publish it?
MR. TRITICO: Yes, your Honor.
THE COURT: All right.
BY MR. TRITICO:

Q. This is kind of hard to read, but can you read the first line from -- you can read it from the one you've got there, Dr. Lloyd. Can you read the first line of McVeigh Exhibit J317?
A. "Microscopic portion of wood," brackets, "[see photo]," close brackets, "has glaze of crystals."
Q. You weren't making that up. You read that out of Agent Burmeister's notes; right?
A. That's correct.
Q. Now, with respect to the fees that you're being paid in this case, you don't work for free, do you?
A. That's correct.
Q. As your fees, the hourly rate that you're charging -- have they been approved by this Court prior to the time that we hired you?
MS. WILKINSON: Objection.
THE COURT: Overruled.
THE WITNESS: Yes, they have.
BY MR. TRITICO:
Q. Before you began your private -- well, let me ask you this:

Since you began your private consulting work, has any prosecutor ever asked you for your help?
A. Yes. On occasions, I have had the inquiries, yes.
Q. And have you helped them when they asked?
A. So far as I could, yes.
Q. Now, prior to your retirement and beginning your private consulting business, were you working for law enforcement entities in Great Britain?

A. Yes.
Q. Which ones?
A. All of -- mainly the police forces within the Midlands of England and -- but providing a national service in some particular areas in which I had an expertise.
Q. How many years of your professional career did you spend assisting law enforcement in their forensic investigations?
A. 25, 26 years.
Q. In the United Kingdom, is it true that several bombing convictions have been reversed in the last 10 or 15 years for faulty forensic work?
MS. WILKINSON: Objection, your Honor.
THE COURT: Overruled.
THE WITNESS: That is correct.
BY MR. TRITICO:
Q. Ms. Wilkinson took you through quite a few questions regarding the contamination issues that you discussed and

talked to you about some specific testimony that you gave in England about that. Do you recall that?

England about that. Do you recall that?
A. I do.
Q. Now, I thought I heard you say when you were trying to explain your testimony in that case -- you said something about
the fire brigade.
A. Yes.
Q. What did you mean by that?
A. The issue was the fire brigade trying to put out a fire in a gas holder, and they were spraying the area with hoses, high-pressure hoses.
Q. You weren't talking about a garden hose?
A. I beg your pardon?
Q. You weren't talking about a garden hose?
A. That is correct.
Q. Was that the issue in that case regarding the contamination
or the lack of forensic evidence?
A. The issue that -- the issue that was raised was could powdered PETN be washed off a metal surface by a hose; and, of course, it can be very readily, but it certainly couldn't be washed off of the hand by applying a hose to a hand.
Q. Now, you were trying to explain your answer about the contamination issue in this specific case; and I'm sorry I don't recall the name of this case that Ms. Wilkinson was asking you about that she showed you the transcript from.

A. Yes, yes.
Q. You were attempting to explain the contamination issue in that case and didn't get the opportunity. Why don't you take a
moment to explain the contamination issue that you raised in this case.
A. There were two contamination issues at least: that first of
all, the people who examined the scene weren't wearing protective clothing or not properly wearing it; that they went from the scene to search the defendant's house, so that there was a possibility of transfer, cross-transfer between the scene
and the house.
This was the issue; and as I was saying, it is now subject to appeal.
Q. Now, we've talked quite a bit about contamination in the last few days, and you've talked quite a bit about -- quite a bit about it today. Why don't you take a moment to compare and
contrast the contamination controls that you have seen with respect to the FBI Laboratory and their explosives residue program and labs like the one where Linda Jones works. You've been there, haven't you?
A. Yes, I have.
Q. Take a moment to compare and contrast the controls that are

are
taken between those two entities. Can you do that?
A. Well, the contrast is fairly complete. In Ms. Jones' laboratory and in the Belfast laboratory, there is an

exclusion, a total exclusion, of anybody who has had recent contact with explosives. The laboratories are subject to a monitoring program, a weekly monitoring program, and a weekly cleaning program.

If levels of contamination over the order of 10 nanograms are found, then there is a cleanup instituted almost immediately; and if much higher levels are found, then the work
is stopped.

So it goes on.

Q. What you're telling me is they've set an upper limit on background contamination and they won't allow their lab to get beyond that; is that correct?
A. That's correct.
Q. And to do that, to have a program like that, you have to regularly monitor that area to make sure that you haven't exceeded your upper-level limit of background contamination. Is that right?
A. That is quite correct.
Q. Would you expect that any quality forensic lab would do that?
A. I would expect every quality forensic lab would have a thorough cleaning and monitoring program.
Q. Ms. Wilkinson was asking you a moment ago about the car and
the testing that was performed on the car. Now, you understand
that Agent -- Special Agent Burmeister did that himself; right?

A. Yes.
Q. She was asking you if they did the searches and if there was no residue found, it would show that they did a good job. Right?
A. Yes.
Q. Do you recall that?
A. Yes.
Q. It also suggests that if they did the searches, no one ever
put any -- and they didn't find any, no one ever contaminated that car with PETN, did they?
A. Yes.
Q. How long ago did you request first to examine Q507? Do you
recall?
A. It would be some time ago. As I said, I wished to see it.

I don't remember specifically when. October, perhaps, November.
Q. If you know, was the answer always given that Q507 was still at the FBI lab and couldn't be viewed by you?
A. I don't know what reasons were given.
Q. But your requests were denied. Is that right?
A. Yes.
Q. Would you have come from Great Britain to the United States
to view Q507 sooner if you had been allowed the opportunity by the Government?
A. Yes, of course.

Q. What's a -- could the crystals on Q507 have been preserved by the FBI?
A. Yes, they could have been, if the item had been kept in a desiccator to save the crystals' picking up moisture. I would assume that they have disappeared because they picked up moisture from the atmosphere.
Q. What is a desiccator?
A. It's a large vessel, normally of glass, which contains a substance within it which absorbs moisture.
Q. Did you hear or read actually Agent Burmeister's testimony about why he didn't take any steps to preserve the crystals on Q507?
A. I don't recall the reasons he gave.
Q. Do you recall his reason being that he was through examining it, so it didn't matter anymore? Words to that effect?
A. Yes.
Q. Is that sound forensic science, Dr. Lloyd?
A. No. It is a shame that crystals weren't preserved. I would very much like to have been able to have the opportunity to examine them.
Q. Would you have expected a quality forensic laboratory to have preserved those crystals?
A. Well, I would have hoped that they would have done. I mean, I don't know all the circumstances involved, but I think

they should have been preserved.
MR. TRITICO: May I have a moment, Judge?
THE COURT: Yes.
MR. TRITICO: Thank you, sir.
I pass the witness, your Honor.
THE COURT: Do you have any follow-up?
MS. WILKINSON: No, your Honor.
THE COURT: Okay.
MR. TRITICO: May he be excused?
THE COURT: Any objection to excusing the witness?
MS. WILKINSON: No, your Honor.

THE COURT: You may step down. You're excused.
THE WITNESS: Thank you.
THE COURT: Next?
MR. NIGH: Your Honor, may we approach?
THE COURT: Yes.
(At the bench:)
(Bench Conference 117B1 is not herein transcribed by court order. It is transcribed as a separate sealed transcript.)

(In open court:)
THE COURT: Next witness?
MR. NIGH: Marion Laird, your Honor.
THE COURTROOM DEPUTY: Would you raise your right hand, please.
(Marion Laird affirmed.)
THE COURTROOM DEPUTY: Would you have a seat, please.
Would you state your full name for the record and spell your last name.
THE WITNESS: Marion Day Laird, L-A-I-R-D.
THE COURTROOM DEPUTY: Thank you.
THE COURT: Mr. Nigh.
MR. NIGH: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. NIGH:
Q. Good afternoon, Ms. Laird. You're going to have to speak up so that everyone can hear you. There is a microphone there.
If you'll lean forward into it, we'll be better able to hear you.
A. Okay.
Q. Where do you currently live, Ms. Laird? What city?
A. Burlingame, California.
Q. Is that pretty close to San Francisco?
A. Yes.
Q. How long have you lived in Burlingame?

A. Almost two years.
Q. And before moving to Burlingame, did you live in Kingman, Arizona?
A. Yes.
Q. All right. Did you first live in -- move to Kingman when you were in the eighth grade?
A. Yes.

A. Yes.
Q. And did you attend high school in Kingman, Arizona?
A. Yes.
Q. And graduate there in 1990?
A. Yes.
Q. While you were in school in Kingman, did you know Michael Fortier?
A. While I was in school?
Q. Yes.
A. No.
Q. Did you know Lori Fortier?
A. Yes.
Q. Was she an acquaintance of yours during your school years?
A. Yes.
Q. I'm sorry, Ms. Laird. I forgot to ask you. In Burlingame,
are you studying for a profession right now?
A. Yes.
Q. What --
A. I'm studying to be a registered nurse.

Q. How much more school do you have to go?
A. I've got two more years on a bachelor's degree.
Q. All right. Okay. Now let's go back to Kingman. Was Lori Fortier a close friend of yours while you were in school, or just an acquaintance?
A. No. I -- I knew her as an acquaintance.

Q. All right. After school, did you continue to live in Kingman?
A. Yes.
Q. And during that period of time, did you marry Robert Long?
A. Yes.
Q. Did you have two children as a result of that marriage?
A. Yes.
Q. Now, if I could, I'd like to direct your attention to the spring of 1995. Are you familiar with that period in time?
A. Yes.
Q. During that period, did you -- did your relationship with the Fortiers change?
A. Yes.
Q. In what way did it change? In other words, did you become closer to them, or was it more distance -- distant than it had been in the past?
A. We became a little more than occasional acquaintances. We went to their house about two to three days out of a week. We saw them a lot more frequently and --

Q. Than you had before this --
A. Right. We were merely acquaintances before.
Q. Was that primarily your husband, Robert's initiation?

A. Yes.
Q. Because he was friends with Michael Fortier?
A. Yes.
Q. Did you also have a child that was the same age as the Fortiers' child?
A. Yes.
Q. Did that have a factor in the amount of time that you spent
with the Fortiers?
A. Yes, it did.
Q. During that period of time in the spring of 1995, did you spend quite a bit of time at the Fortiers' residence?
A. Yes.
Q. Would you watch movies and play games and do things like that --
A. Yes.
Q. -- when you were at the Fortiers'?
A. Yes.
Q. Now, I want to direct your attention to the night of April 18, 1995.
A. Okay.
Q. Are you familiar with that time period?
A. Yes.

Q. Where were you that night?
A. We were at Mike and Lori's house.
Q. Do you remember what time you arrived approximately?
A. Be during -- around noon or a little bit earlier on the 18th.
Q. How long did you stay that day?
A. We stayed about all day there and into the night, and then we left -- we stayed there until about 1:00 in the morning.
Q. So over 12 hours --
A. Yeah, we spent the day there and --
Q. At 1 a.m., did you go home to your own house?
A. Yes.
Q. Did you return to the Fortiers' during the morning of the 19th?
A. Yes.
Q. Approximately what time did you arrive?
A. Between 8 and 9.
Q. All right.
A. Well, I'm not really positive on the hour. It was in the morning.
Q. While you and Robert had been gone from the Fortiers', did you hear anything on the news about the Oklahoma City bombing?
A. Yes.
Q. And when you got to the Fortiers', did you discuss that with Michael and Lori Fortier?

A. Yes.
Q. Did Michael and Lori Fortier react the same to the news of the bombing as you and Robert did, or did they react differently?
A. They acted the same. They didn't act any differently that I would notice.
Q. All right. Did they say anything about having any knowledge of any participants in the Oklahoma City bombing?
A. No.
Q. That morning of April 19, 1995, were you all watching television there in the Fortiers' residence concerning the Oklahoma City bombing?
A. Yes.
Q. Were they acting any differently that morning than you had seen them act over the course of the past several months that you had been spending quite a bit of time with them?
A. No.
Q. Did either Michael or Lori Fortier appear nervous?
A. No.
Q. About the Oklahoma City bombing?
A. No.
Q. During the rest of that day, did either of them make any statements about having any knowledge of who would be responsible for the Oklahoma City bombing?
A. No.

Q. Did you see them after that?
A. After?
Q. After April 19 of 1995?
A. Yes.
Q. And during those occasions that you saw them after that, did they say anything about having any knowledge?
A. No.
Q. Were -- did they appear nervous about the situation?
A. No.
Q. Even after Mr. McVeigh was arrested, did their attitude change, or did they appear nervous?
A. No.
Q. Did you attend a barbecue on May 8 of 1995?
A. Yes.
Q. And where was the barbecue held?
A. At Mike and Lori's house.
Q. Michael and Lori Fortier's?
A. Yes.
Q. How did that barbecue come about?
A. It was decided that we would all have a big barbecue.
Q. Who decided?
A. Mike and Robert and Lori, and I agreed. It sounded like a good idea.
Q. When you say Michael, you mean Michael Fortier?
A. Yes. I'm sorry, yes.

Q. And Robert, your husband?
A. Yes, and Lori.
Q. And where was the barbecue held?
A. At Mike and Lori Fortier's house.
Q. Was there any discussion about why to have a barbecue?
A. To have fun. It would be a good idea.
Q. Was it in reference to the FBI or the media?
A. Well --
MR. HARTZLER: Judge, I have to object to the hearsay, if they're offering it for the truth.
THE COURT: Hearsay?
MR. HARTZLER: And relevance.
THE COURT: Overruled.
THE WITNESS: I'm sorry. Can you ask me again.
BY MR. NIGH:
Q. Sure. Was anything said about the reason for the barbecue involving the FBI or the media?
A. Well, we thought we'd have a good time, basically because we had been buzzed so much by the FBI -- and CNN had been there -- and thought -- we'd have a good time and not be worried about what was going on and be like -- kind of like a joke, because we were having a good time.
Q. Did Michael and Lori Fortier express those same sentiments?
A. Yeah; that they would have -- we would have -- it was just -- it was just planned to be a good time, to have the kids

together, have a barbecue, have friends over, enjoy and relax.
Q. Did Michael or Lori Fortier say anything about being concerned about having any knowledge of the Oklahoma City bombing?
A. No.
Q. Are you familiar with the way Michael and Lori Fortier looked during the spring of 1995?
A. Yes.
Q. Let me show just you, if I may, what's been marked for identification as Defendant's Exhibit P165. Do you recognize the person depicted in that photograph?
A. Yes.
Q. And is that a picture of Michael Fortier?
A. Yes.
Q. Is his appearance there consistent with his appearance during the spring of 1995?
A. Yes.
MR. NIGH: Your Honor, I'd move for the admission of P165.
MR. HARTZLER: I didn't understand. This was -- this is a photo from the spring of 1995?
THE COURT: How he looked in the spring of 1950 -- or

--
'95.
MR. HARTZLER: I have no objection.
THE COURT: Received. You may publish it.

Marion Laird - Direct

MR. NIGH: Thank you, your Honor.
BY MR. NIGH:
Q. During the course of spring of 1995, did Mr. Fortier sometimes wear his beard in a goatee and sometimes in a full beard?
A. Yes.
Q. As is depicted in this exhibit?
A. Yes.
Q. Were you also familiar with Lori Fortier's appearance during the spring of 1995?
A. Yes.
Q. Let me show just you, if I may, what has been marked for identification as P166. Do you recognize the person depicted in that photograph?
A. Yes.
Q. Is that a picture of Lori Fortier?
A. Yes.
Q. Is that picture consistent with her appearance during the spring of 1995 when she was dressed up?
A. Yes.
MR. NIGH: Your Honor, I'd move for the admission of P166.
MR. HARTZLER: No objection.
THE COURT: Received. It may be displayed.
MR. NIGH: Thank you.

Marion Laird - Direct

BY MR. NIGH:
Q. Ms. Laird, during the entire course of the spring of 1995, particularly after April 19 and after Mr. McVeigh's arrest, did
either Michael or Lori Fortier give any indication to you that they had any knowledge of the Oklahoma City bombing whatsoever?
A. No.
MR. NIGH: That's all I have, your Honor.
THE COURT: Do you have any questions?
MR. HARTZLER: A few.
THE COURT: All right.
With the jury's permission, we'll go ahead and complete this witness' testimony.
MR. HARTZLER: They're not going to vote on it right now?
THE COURT: You don't get a vote.

CROSS-EXAMINATION

BY MR. HARTZLER:
Q. Pardon me.

Ms. Laird, we've never had the privilege of meeting; is that right?
A. No.
Q. Okay. This time that you were in Kingman after the bombing was a fairly tense time. Is that not fair?
A. I'm sorry. Repeat.
Q. After the Oklahoma City bombing, would you not say that the

period of time for the next couple of weeks was a pretty tense time in Kingman, Arizona?
A. For myself, I know it was.
Q. I mean for yourself and for the Fortiers, there was a lot of contact with law enforcement. Is that not true?
A. I can't speak for Mike and Lori; but as far as my household went, yes.
Q. I mean, just in terms of the party that you guys ultimately had, there was a fair amount of tension in the air because the FBI was contacting people pretty regularly. There were a lot of agents in Kingman. Is that not fair?
A. Yes.
Q. And they were contacting you regularly and the Fortiers were complaining about being contacted themselves.
A. Yes.
Q. Okay. And you said that on the morning after the bombing, you went over to the Fortiers' household and you had been there the previous day. Is that right?
A. Yes.
Q. You were watching the bombing and that was on full-time. Correct?
A. Yes.
Q. You remember you were watching CNN. Is that right?
A. I can't remember specifically. I think it was on almost every channel.

Q. It was on full-time, though, on CNN. Do you recall that?
A. No.
Q. You don't remember what channel you were watching. Is that right?
A. Right.
Q. Okay. And you don't recall what time you arrived?
A. No, I don't.
Q. But do you remember the previous evening playing cards with the Fortiers?

A. Yes.
Q. And you played cards with them fairly regularly?
A. Well, fairly.
Q. You remember one time when Mr. McVeigh sat in and took a hand for Michael Fortier? Did he ever come over there while you were playing cards?
A. No.
Q. Have you ever met Mr. McVeigh?
A. No.
Q. You've never met him?
A. No.
Q. Okay. He never came to the Fortiers' house when you were there?
A. No.
Q. You never saw him in the Kingman area?
A. No.

Q. Throughout the spring of 1995, you never saw Timothy McVeigh?
A. No.
Q. The Fortiers' appearance, or at least Michael's appearance changed fairly regularly. I mean he could clean himself up; is
that not fair?
A. Yes.
Q. For his wedding, for example, and other times he would shave his beard?
A. Yes.
Q. Okay. But he could look pretty grungy. Is that not also fair?
A. Yes.
Q. And the picture that we saw here made him look pretty grungy?
A. Yes.

MR. HARTZLER: I don't think I have anything further. Could you give me one moment, your Honor?
THE COURT: Yes.

BY MR. HARTZLER:
Q. Do you recall visiting the house in March of 1995?
A. Yes.
Q. Do you recall when Mr. Fortier was in the hospital in Prescott?
A. No.

Q. So you never visited when Mr. Fortier wasn't there?
A. I'm sorry. I don't understand.
Q. You have no recollection of him going to the VA Hospital in
March of 1995?
A. I don't remember if he did or not. I didn't pay attention to their affairs regarding that.

to their affairs regarding that.
Q. And you never knew someone was living in the front bedroom during this entire time?
A. No.
MR. HARTZLER: Thank you. I have nothing further.
THE COURT: Any other questions?
MR. NIGH: No, your Honor.
THE COURT: The witness excused?
MR. NIGH: Yes, please.
THE COURT: Agreed?
MR. HARTZLER: Thank you.
THE COURT: You may step down. You're excused.
Members of the jury, we appreciate your assumed willingness to work a little bit overtime; and we, of course, excuse you now until 9:00 tomorrow morning.
And again, of course, I must caution you: Trial is not complete. You've not heard all of the testimony you're going to hear or have seen all of the exhibits; and of course arguments and instructions are a part of the case as well. So please continue to keep open minds, avoid discussion of the case with all other persons, and be very careful about the things that you read, see, and hear to avoid anything that could influence your judgment in this case, knowing that your decisions will be based on the law and the evidence presented to you in the course of the trial.
You're excused till 9:00 tomorrow morning.
(Jury out at 5:07 p.m.)
MR. JONES: Your Honor, may we approach the bench.
(At the bench:)
(Bench Conference 117B2 is not herein transcribed by court order. It is transcribed as a separate sealed transcript.)

(In open court:)

THE COURT: Now, you have a witness that I need to talk to her.

MR. NIGH: That's right, your Honor. Debbie Brown.

THE COURT: What's her name?

MR. NIGH: Debbie Brown.

THE COURT: Thank you.

I guess she left the witness room but should be back.

Let's take up the matter of the FBI Laboratory report.

That is from the Office of the Inspector General, a report that was -- is dated April, 1997.

MR. JONES: Your Honor, if the Court please, defendant moves to introduce as evidence in this case the report of the Inspector General of the FBI Laboratory, which has been marked J403, McVeigh Defendant Exhibit 403, and on the basis that the entire Inspector General's report has to do with the three units of the laboratory that are at issue in this case. And it's offered to impeach the representations, testimony, and work of those units.

THE COURT: Ms. Wilkinson, are you going to speak to this?

MS. WILKINSON: Yes, your Honor.

THE COURT: All right. I have the J403 and have reviewed it, I would say, generally; but I have focused principally on Section G, which appears from pages 217 through 256.

No. That's not true.

I believe it ends at 243.

MS. WILKINSON: That's right, your Honor.

THE COURT: All right.

MS. WILKINSON: Obviously, we'd object to the entire report being introduced based on relevance. There are many other cases discussed in this report, as your Honor knows; other examiners that were --

THE COURT: Yes.

MS. WILKINSON: -- witnesses in this case, so I think I should focus the discussion on Section G.

THE COURT: Yes.

MS. WILKINSON: Section G in large part deals with Mr. Williams and the report that he wrote, which has not been introduced in evidence. He hasn't testified as an expert, and his conclusions as to the type of device, the velocity of detonations, have not been an issue in this case. Clearly, those sections would not be relevant.

The other sections deal with Mr. Thurman's review of Agent Williams' report. Again, because that report isn't in evidence and Agent Thurman hasn't been a witness, those sections would not be relevant to the case.

And the only remaining section, I believe, would be Mr. Martz' examination of the evidence, which noted his

failure
to do a microscopic examination before he did the vacuuming.
I don't believe that's been raised as an issue in
the
case. It wasn't elicited from any of the witnesses; and I
believe if Agent Burmeister testified, he wouldn't deny that.
He would give an explanation, but he wouldn't deny that Agent
Martz did not conduct a microscopic examination before he
conducted the vacuuming of certain samples.
So I don't believe there is anything in this section
of the report that's relevant to the testimony the jury has
heard.
THE COURT: Well, it seems to me, though, that Roman
IV on page 239 over to Roman V, "Conclusion," on page 242 do
relate to the work done by Mr. Martz prior to, as I understand
the testimony -- prior to the exhibit going to
Mr. Burmeister -- I mean the -- not the exhibits but the
items --
MS. WILKINSON: That's true.
THE COURT: -- of clothing.
MS. WILKINSON: In large part, I believe -- and let
me
look specifically at the statements -- I believe they were
talking about testing of the knife, which we have specifically
not introduced. As you know, there was a finding of PETN on
the knife by Agent Martz. It wasn't confirmed by Agent
Burmeister for a variety of reasons, and we have not
introduced
that because we wanted to only introduce Mr. Burmeister's
conclusions. If this is entered into evidence, we would, of
course, want to call Agent Burmeister to explain that on
rebuttal. I'm not sure that's something the defense wants to
elicit.
THE COURT: All right. Mr. Jones, I am agreeing
with
the Government, excepting for this Martz' examination of
evidence section. It seems to me that can have relevance to
the case in view of his having handled this -- these matters -
-
the clothing.
MR. JONES: Yes.
THE COURT: Now, the knife, of course, has not been
testified to.
MR. JONES: Your Honor, may we in view of what your
Honor's announcement of the pages that you're considering --
may we have the opportunity to review this overnight and see
if
we want to offer just these pages?
THE COURT: Yes.
MR. JONES: Yes.
THE COURT: By the proffer with respect to the --
all
other parts of the report, I'm ruling, are -- that it's -- the
rest of the report is irrelevant.
MR. JONES: I understand.
THE COURT: Will you advise Government counsel;
because as I understand it from Ms. Wilkinson, she would like

because as I understand it from Ms. Wilkinson, she would line up Agent Burmeister to testify in rebuttal, if this comes in.

MR. JONES: Yes, of course.

THE COURT: All right.

MS. WILKINSON: Thank you.

MR. TRITICO: Your Honor, may I be heard for a moment?

THE COURT: On what subject?

MR. TRITICO: On this subject with respect to Agent Williams and his testimony today.

THE COURT: No. I've ruled.

MR. TRITICO: Okay.

THE COURT: Bring in this witness.

You can just sit down here to have a place to sit.

DEBBIE BROWN: All right.

THE COURT: You don't see a jury in the box, and we're not in trial as such right now; but it's -- you're Debbie Brown.

DEBBIE BROWN: Yes.

THE COURT: I've been informed that you've been called, or that the defense intends to call you as a witness in this case to testify with respect to your relationships and contacts with Lori and Michael Fortier.

DEBBIE BROWN: Yes.

THE COURT: Is that your understanding?

DEBBIE BROWN: Yes.

THE COURT: And I've also been told that in connection with your contacts with those persons, there may be things which could expose you to a possible prosecution in connection with controlled substances.

DEBBIE BROWN: Yes.

THE COURT: You understand that?

DEBBIE BROWN: Yes.

THE COURT: Now, I don't know the exact questions that are going to be asked of you. The reason that I asked that you come in here before you're called as a witness is to make sure you understand your rights under the Constitution of the United States. It's my obligation, of course, to make sure that all persons appearing in this court in whatever role, witnesses included, have their constitutional rights protected. And you have a right to refuse to answer questions if the answers to those questions could incriminate you, as we say, but what we mean is expose you to the possibility of being prosecuted for some crime based on what you say in truthful testimony.

You understand what I'm saying?

DEBBIE BROWN: Yes.

THE COURT: Now, that doesn't just mean that you come out and say, I committed a crime. It also means that if that information tied up with any other information that might be available to prosecutors, it could result in somebody charging you with some crime; so it's directly or indirectly.

Do you follow my explanation?

DEBBIE BROWN: Yes.

THE COURT: And of course, there are also two levels of government that deal with prosecutions for violation of drug laws, controlled substance: state authorities -- and I guess in this case you're be -- going to be asked about things in Arizona.

DEBBIE BROWN: Yes.

THE COURT: And federal law, dealing also with controlled substance; so there are two governments, in a way, that could be interested in your testimony and do something about it, contrary to your interest. Do you understand?

DEBBIE BROWN: Yes.

THE COURT: Now, given that, one of the other things we need to know is whether if you are -- if you are called as a witness and asked these questions, you wish to invoke the Fifth Amendment. That's the privilege I'm talking about.

DEBBIE BROWN: I just recently found out about that. I'm testifying tomorrow. Is that correct?

THE COURT: Yes. But we could have you talk to a lawyer before that.

DEBBIE BROWN: I would like that.

THE COURT: All right. We'll get a lawyer to see you between now and 9:00 tomorrow morning so that you can consult with that lawyer and then let --

Mr. Nigh, are you the one who is calling her?

MR. NIGH: Yes, your Honor.

THE COURT: Let Mr. Nigh know, because we also do not -- and the reason we're doing this outside of the presence of the jury is that we don't want to have this situation arise where you feel the need to invoke your constitutional protection with the jury present because that has implications that we want to avoid.

Okay. We'll get a lawyer to talk with you.

DEBBIE BROWN: Okay. Thank you.

THE COURT: And then you talk to Mr. Nigh.

DEBBIE BROWN: Okay.

THE COURT: Okay. We'll be in recess, 9:00.

(Recess at 5:20 p.m.)

* * * * *

INDEX

DEFENDANT'S EXHIBITS

Exhibit	Offered	Received	Refused	Reserved	Withdrawn
J317	11064	11065			
J403	11099				
P165	11086	11086			
P166	11087	11087			

* * * * *

REPORTERS' CERTIFICATE

We certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter. Dated at Denver, Colorado, this 27th day of May, 1997.

_____

Paul Zuckerman

_____

Kara Spitler