Tuesday, May 27, 1997 (morning)

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 116)

Proceedings before the HONORABLE RICHARD P. MATSCH, Judge, United States District Court for the District of Colorado, commencing at 9:00 a.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.

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PROCEEDINGS

(In open court at 9:00 a.m.)

THE COURT: Be seated, please.

Good morning. Make I have counsel at the bench a moment, please.

(Bench Conference 116B1 is not herein transcribed by court

order. It is transcribed as a separate sealed transcript.)

(In open court:)
(Jury in at 9:02 a.m.)
THE COURT: Members of the jury, good morning. We're ready to resume our trial and ready for the next witness.
MR. JONES: Anthony Rockwood, your Honor.
THE COURTROOM DEPUTY: Would you raise your right hand, please.
(Anthony Rockwood affirmed.)
THE COURTROOM DEPUTY: Would you have a seat, please.
THE WITNESS: Thank you.
THE COURTROOM DEPUTY: Would you state your full name for the record and spell your last name.
THE WITNESS: Anthony Adams Rockwood, R-O-C-K-W-O-O-D.
THE COURTROOM DEPUTY: Thank you.
THE COURT: Mr. Jones.
MR. JONES: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. JONES:
Q. Mr. Rockwood, how are you employed?
A. I'm a professor of meteorology at Metropolitan State College here in Denver.
Q. And how long have you been so employed there?
A. Since 1979.
Q. And what are your teaching areas?
A. I teach areas that are related to operational weather,

primarily forecasting, analysis, dynamic meteorology, physical meteorology, mesometeorology.
Q. And what is mesometeorology?
A. Mesometeorology is the study of weather systems that are on the scale, the size and duration scale, of a typical state. Involves storm systems like thunderstorms, snowstorms, windstorms, that sort of thing.
Q. And are you also or have you been a research meteorologist?
A. Yes, I have.
Q. For whom and for how long?
A. I was employed part-time at the National Oceanic and Atmospheric Administration's environmental research labs from 1983 until 1993 on a faculty part-time basis.
Q. And would you tell us, please, your education.
A. I have a bachelor's degree from the University of Denver in physical geography and a master's degree in atmospheric science from Colorado State University.
Q. Now, is there a procedure by which a meteorologist becomes certified?
A. Yes, sir.
Q. And would you tell me, please, what that is.
A. The American Meteorological Society is the professional society to which most meteorologists belong. They have a certification program for meteorologists who are interested in getting into the business side or consulting side of the

science.
Q. And are you presently certified?
A. I am certified, but my certification is inactive.
Q. And why is that, sir?
A. I don't need to be certified to do the job that I'm in.
Q. And the job that do you is teaching and conducting research?
A. That's correct.
Q. All right. Now, have you conducted numerous research projects based upon grants?
A. I have conducted research based upon grants.
Q. All right. And just in general, what have those research projects been?
A. I've received two grants from the National Science Foundation, one to get equipment to do field measurements of thunderstorms and a second to purchase equipment to equip our lab and help our students to research satellite meteorology.
Q. Are you a member of any professional organization?
A. Yes, the American Meteorological Society.
Q. And have you received any teaching awards at your place of employment?
A. I was recently nominated -- I became a finalist for the Golden Key Honor Society Excellence in Teaching Award.
Q. At the college where you presently teach?
A. Yes, that's right.

Q. Now, Mr. Rockwood, I want to ask you some questions concerning surface weather observations, and ask you first to tell us what is an official weather observation?
A. An official weather observation would be one that was taken by an official government agency in accordance with standardized observing procedures.
Q. And who is responsible for taking those official weather observations?
A. It's a combination of the National Weather Service and the military.

Q. And how are these observations recorded?
A. Well, they're recorded by the observer first on paper, on forms, and then that information is transmitted to the National Climatic Data Center to be archived, and at that point it becomes official.
Q. And are there numerous weather-reporting stations all over the country?
A. Oh, yes, many.
Q. What are the measured vs. subjective portion of a weather observation, Mr. Rockwood?
A. Measured are those which are measured with an instrument such as a thermometer or barometer. The more subjective ones are the ones that the observer must evaluate for him or herself

are the ones that the observer must evaluate for him or herself such as cloud amount, cloud height, visibility, more subjective parts of the observation.

Q. What are the uncertainties in weather observation?
A. Well, there are many. The subjective portions are -- there's always an element of uncertainty in them.
Q. Now, is there an accepted definition of drizzle, rain, rain shower, and thundershower?
A. Yes, there is.
Q. And how are the rain intensities determined?
A. By a combination of visibility at the time of the precipitation and accumulated rain at the time of the precipitation.
Q. Can weather between weather stations be estimated or determined?
A. It can be estimated.
Q. And under what conditions are these estimates most reliable?
A. When you have a weather system that is continuous and uniform over both space and time so that you're reasonably sure that the same type of weather observed in one location was occurring at another.
Q. Now, at our request, did you review the surface weather observations for the date of April 17, 1995, in the area in and around Junction City, Kansas?
A. Yes, I did.
Q. And which ones did you review?
A. I reviewed the observations from Manhattan, Kansas; Fort

Riley; Salina; and Emporia.
Q. And would you tell me, please, what was the importance of reviewing the records from these locations?
A. You review the observations from as many stations as you can in the area that you're interested in to -- to get some familiarity with the overall coverage of the weather in that area.
Q. All right. And what area were you particularly asked to advise us with regards to weather conditions?
A. The Junction City, Kansas, area.
Q. Approximately how far from Junction City are these weather stations that you enumerated?
A. Fort Riley is the closest, and it's approximately 15 miles. Manhattan, Kansas, is about 20 miles. Actually, they're a little bit closer. I think Fort Riley is about 10 miles, and Manhattan is about 15. Salina is approximately 50 miles west, and Emporia is approximately 50 miles southeast.
Q. And did you review the records?
A. Yes, I did.
Q. What general weather conditions were occurring in these locations on April 17, 1995?

A. It was cool with temperatures in the upper 40's to low 50's, overcast, and there were rain showers over the entire area.
Q. Based upon your review of these records, can you give an

opinion as to what weather conditions were occurring during the time period of 3:50 to 4:20 p.m. on April 17, 1995?
A. Yes, I can give you an opinion.
Q. All right. And what is that opinion?
MR. HARTZLER: I object without further foundation. As to the narrowness of the time period.
THE COURT: Overruled.
BY MR. JONES:
Q. You may answer, sir.
A. Could you repeat the area and time?
Q. Sure. Based upon your review of these areas, can you give an opinion as to what weather conditions were occurring during the time period of 3:50 to 4:20 p.m. in Manhattan on April 17, 1995?
A. In Manhattan?
Q. Yes, sir.
A. Manhattan had low clouds, cool temperatures, rain showers, and an east wind.
Q. And do you recall whether there was any fog?
A. Yes, there was.
Q. Now, what was the longest period of time for which it stopped raining in Manhattan, according to the records you reviewed?
A. I have the records with me if you'd like me to look at them, or I can recall from memory.

Q. No, you may look at them. They should be on your roster there.
A. Yes.
Q. While you're looking at them, what is it that you're looking at?
A. I am looking at the -- a copy of the -- the weather, the hourly weather observations from Manhattan, Kansas.
Q. And who prepared that?
A. Who recorded the observations?
Q. Right, I should say who recorded it.
A. A weather observer at the National Weather Service office in Manhattan, Kansas.
Q. All right. And are these official government records?
A. Yes, they are.
Q. All right. Tell me now what you found from your review.
A. The longest period of time that it did not stop, according to the records for Manhattan, Kansas, was 8 hours and 42 minutes.
Q. All right. And do you know when that was?

A. Yes, I do.
Q. What time?
A. Rain began -- rain was first observed at 12:30 p.m. Central Daylight Time and was reported to -- was still raining at 10:00 when the office closed. At 10:00 p.m.
Q. At 10:00 a.m. or p.m.?

A. At 10:00 p.m. Central Daylight Time, when the office closed.
Q. Did you also review the records of Fort Riley?
A. Yes.
Q. Based upon your review of the Fort Riley records, can you give an opinion of the weather conditions for Fort Riley for the time period of 3:50 to 4:20 p.m. on April 17, 1995?
A. Yes, I can.
Q. What is that opinion?
A. That the conditions were cool, cloudy, with rain and east wind.
Q. Now, in the records that you have there with respect to Fort Riley, was there a notation at 3:55 p.m.?
A. I'd have to look at the record itself.
Q. All right.
A. Yes, there is.
Q. And what was the description then?
A. The weather reported at 3:55 p.m. Central Daylight Time was estimated 800 overcast, 4 miles' visibility, light rain showers and fog, temperature of 49, east wind.
Q. What was the longest period of time in which rain did not stop at Fort Riley on April 17 according to these records?
A. According to these records -- and I only have the calendar day of the 17th of April -- the longest period of time was 11 hours and 59 minutes.

Q. Now, a moment ago when I was asking you about Manhattan, the question was what was the longest period of time for which it stopped raining in Manhattan. I want to be sure that I asked the right question. And the longest period of time that it did not stop raining was the time you gave?
A. Yes.
Q. All right. Now, what was the -- well, let's see. Let me hand you an exhibit. Do you have in front of you A13?
You should have A13 in front of you.
A. Yes, I do.
Q. What is A13?
A. A13 are the hourly surface weather observations from Fort Riley. And I should mention that Fort Riley probably goes by the name of Marshall, Kansas.
Q. Why is that?
A. We have different ways of identifying different stations. I don't think I can give you a good reason why it's got two

names.
Q. All right. But this is the Fort Riley weather?
A. Oh, yes.
Q. All right. And where did you obtain A13?
A. These records are available to the public through the National Climatic Data Center.
MR. JONES: All right. I move the admission of A13, your Honor.

MR. HARTZLER: No objection.
THE COURT: A13 received.
BY MR. JONES:
Q. Based upon your review of the Salina weather observation records, what is your opinion about the weather conditions for the period of 3:50 to 4:20 p.m. in Salina on April 17, 1995?
A. That it was, again, cool, overcast, with rain and an east wind.
Q. Now, for the Salina records, do we have an observation every hour, every two hours? How frequent is Salina?
A. They're every hour.
Q. All right. What was the longest period of time in which rain did not stop in Salina on April 17, 1995, according to those records?
A. 9 hours and 25 minutes.
Q. Based upon your review of the Emporia weather observation records, what is your opinion about the weather conditions for the time period of 3:50 to 4:20 p.m. in Emporia, Kansas, on April 17, 1995?
A. That it was cool, overcast, rainy, with an east wind.
Q. What was the longest period of time in which rain did not stop in Emporia on April 17, 1995, according to the Emporia records?
A. 10 hours and 30 minutes as of 10:00 p.m. Central Daylight Time when the weather station closed.

Q. Now, do you also have in front of you McVeigh Exhibit A5?
A. I need to be shown which one is A5.
MR. JONES: All right.
MR. HARTZLER: So do I.
MR. JONES: I'm sorry?
MR. HARTZLER: So do I.
BY MR. JONES:
Q. Let me keep these just here for a moment, Mr. Rockwood.
Based upon your review of the surface weather observations for Manhattan, Fort Riley, Emporia, and Salina, can you give an opinion about the general weather conditions in Junction City on April 17, 1995?
A. Yes, I can.
Q. And what is that opinion?
A. That it was essentially the same as the observations at those four locations, and that it was cool, cloudy, with rain

those four locations, and that it was cool, cloudy, with rain showers and an east wind.
Q. In your opinion, what would be the longest period of time when it did not stop raining in Junction City, on April 17, 1995?
A. 8 to 10 hours.
Q. And do you recall when that occurred?
A. My guess is that it was --
MR. HARTZLER: Object to the guess.
THE COURT: Yes, no guesses.

BY MR. JONES:
Q. What is your opinion?
A. My opinion is that rain showers began late morning and continued well into the evening.
Q. What is your opinion based upon?
A. It's based upon the weather observations from those four locations as well as the radar data from that time.
Q. All right. Could you turn back to A13 for a moment.
A. Yes.
Q. Do you see in the upper right-hand corner where it says "Marshall AAF"?
A. Yes.
Q. Do you know what that stands for?
A. I believe I do, yes.
Q. What does it stand for?
A. Marshall Army/Air Force.
Q. All right. And do you know how far this location is from the Dreamland Motel?
A. Not exactly.
Q. Now, if there were scattered showers or isolated showers in the area where it was raining only in some parts, how would you know this based upon the surface weather observations?
A. How would I know if it was raining?
Q. Yes, if there were scattered showers or isolated showers in the area where it was raining only in some parts, how would you

know that based upon the surface weather observations?
A. Well, you would only know what's happening at the weather station.
Q. And are isolated showers less predictable?
A. Yes.
Q. Why?
A. By their very nature, they are small and short in duration, begin and end somewhat unpredictably.
Q. And what is a light rain shower?
A. A light rain shower is one in which the visibility is over 5/8 of a mile at the time of the rain shower.
Q. Now, are you familiar with a weather radar?
A. Yes, I am.
Q. And what is it?

A. It's a device that is used to measure the location, intensity, and movement of precipitation-producing clouds.
Q. And are you familiar with something -- and I will give you the spelling -- or the initials, rather -- N-E-X-R-A-D?
A. Yes, I am.
Q. And what is that?
A. It's a NEXRAD radar, which is an acronym that stands for "next generation radar." And it's the weather radar system that the National Weather Service uses for detecting precipitation around the country.
Q. Is it a form of a doppler radar?

A. Yes, it is.
Q. And what does that mean?
A. Doppler radar means that the radar can tell not only the location and intensity of an echo, but its direction of motion.
Q. All right. And it is the National Weather Service that is responsible for taking the weather radar observations?
A. That's correct.
Q. And who is responsible for maintaining the weather radar equipment?
A. The National Weather Service.
Q. Can weather radar data be used to estimate the precipitation on the ground?
A. It can be used to estimate the rain on the ground, yes.
Q. Now, you should have in front of you McVeigh Exhibit A16, which is the one that has the ribbons on it.
A. Yes, I have that.
Q. Do you see that?
A. Yeah.
Q. What is it?
A. These are five-minute color images of the radar from the Topeka, Kansas, site.
Q. And who prepared this document?
A. Well, it was prepared by the National Climatic Data Center.
Q. And is that part of the National Weather Service?
A. Not directly.

Q. Is this a document available to the general public?
A. Yes.
Q. Has it been certified by the National Climatic Data Center?
A. Yes, it has.
MR. JONES: Your Honor, I offer Defense Exhibit A16.
MR. HARTZLER: No objection.
THE COURT: Did you say "no objection"?
MR. HARTZLER: No objection.
THE COURT: Okay. A16 received.
BY MR. JONES:
Q. Did you review weather observations from the period of 3:50 p.m. to 4:20 p.m. for April 17, 1995?

A. Yes, I did.
Q. What does the radar weather observation and the surface weather observation tell you about the presence of rain in Junction City on April 17, 1995, between 3:50 and 4:20 p.m.?
A. It tells me that rain was likely.
Q. How likely?
A. Very likely.
Q. Why?
A. The combination of the surface observations and the weather radar indicate that there were probably rain-producing clouds in that vicinity and they were increasing in their intensity and coverage during that 30-minute period.
Q. Now, can you locate that on A16?

A. Yes, I can.
Q. All right. Would you turn, please, and tell me what page.
A. Beginning on the first page.
Q. You mean the first page after the certification?
A. That's right.
MR. JONES: All right. May I publish this, your Honor?
THE COURT: Yes.
BY MR. JONES:
Q. All right. What is being shown on the monitor now, Mr. Rockwood?
THE COURT: It's right in front of you, if you look.
THE WITNESS: Oh. Thank you.
THE COURT: I thought you had it covered.
THE WITNESS: I did.
It's quite out of focus.
BY MR. JONES:
Q. All right. Let's see if we can help you.
A. Keep going.
Q. Better?
A. It's better.
Q. All right. This is about the best we can get it.
A. Okay.
Q. All right. Now, what is relevant on this sheet of paper with respect to what you have testified?

A. Well, the date, the time, and of course the identification of the radar in question.
Q. All right. First of all, what is the period of time that we're talking about here?
A. Okay. Now, I'm going to be referring to my hard copy of this for the date and time since it's not clear enough on the screen for me to read it.
Q. All right. We can zoom in to a particular area, if you'll point to it.
A. The upper right-hand text contains the date and time information

information.

Yes, there you go. Okay.
Q. You're referring to 4-17-95, 2052?
A. That's correct.
Q. All right.
A. That says April 17, 1995, and the time is 2052. That is the time on a 24-hour clock in Greenwich Time, which when converted to Central Daylight Time is 3:52 p.m. Central Daylight Time.
Q. All right. Go ahead.
A. Just below that, it says RBA, KTWX.
Q. Yes.
A. That's identifying that as the Topeka radar.
Q. All right.
A. Okay. The rest of it I think is somewhat more technical.

I can identify it, if you like.
Q. Yes, please.
A. The elevation of the station, 1415 feet, that's 1,415 feet. I'm not certain what the numbers are to the right of that. Elevation --
Q. All right --
A. Excuse me.
Q. No, go ahead.
A. Elevation equals 0.5 degrees. That is the elevation angle of the radar beam above the ground, above the horizon. That gives us an indication of how high above the ground the radar is looking at different distances from the radar site itself.
Q. Now, the various colors that are on this photograph, what do they represent?
A. They represent the intensity of the echo, itself.
Q. All right. And what is the most intense?
A. The most intense would be the red or the bottom of that scale, as it goes from red to magenta to ultimately black.
Q. Now, are you able to locate Junction City on this photograph or this map?
A. On the photograph, I am. You'll have to move it about there. Now, if you'd zoom back in again, please.
Okay. That's fine. Now focus. That's fine. To the left center, the abbreviations JCT.
Q. Can you use a pointer there -- I think there's one -- and

just point to it.
A. Yes.
THE COURTROOM DEPUTY: Underneath.
BY MR. JONES:
Q. You have to reach under the glass.
A. And point to it?
Q. Yes.
A. Now, I don't think that anything is happening.

Q. You have to press on it.
A. I am pressing on it.

Q. Press the button on the pen, I'm told.
A. Yes, sir, I'm doing that.
Q. All right. Well, let me point.
A. All right. Yes.
Q. See if that works. Can you see on your monitor?
A. Yes, I can.
Q. Now, let me change glasses.
Is that it?
A. Yes, it is.
Q. That's Junction City?
A. Well, that's the identification of the junction at this. The black lines that you see there are road map -- are roads.
Q. All right.
A. So you can get yourself oriented that way.
Q. And in the color diagram, what does that tell us about the

Junction City area?
A. If you look at the color in that vicinity and then go over to the scale on the right-hand side, you can see that in that area, since it was green -- greenish, that indicates that there were radar echoes in that area but that they were light.
Q. And in layman's terms, what does that mean?
A. That means that there were -- there were probably light, rain-producing clouds over Junction City at that time.

Q. All right. Now, the second page. What is this a picture of? What does the legend tell us?
A. It's the same thing, just five minutes later, at 2057 or 3:57 Central Daylight Time.
Q. All right. And this is Junction City?
A. It is Topeka. It's the Topeka radar. Oh, sorry.
Q. No, I was pointing to Junction City, but I have to move it and then zoom in.
A. Yes.
Q. Is this Junction City?
A. Yes, it is.
Q. And has there been any change in the last five minutes?
A. Yes. The change is that the general area of light precipitation as indicated by the green area has moved from south to north indicating continued light rain shower in that area.
I might point out, also, that the yellow areas

indicate somewhat heavier rain showers. And you can see they're more scattered, more spotty.
Q. All right. The next page is taken how much later?
A. Five minutes.

Q. So this would be -- local time would be what?
A. 4:02 p.m.
Q. April 17?
A. That's correct.
Q. Now, if I move to Junction City again, has there been any change in the last five minutes?
A. Yes, there has. The general area of light rain, the green area, has continued to move from south to north; and there might have been a slight increase in the intensity because there is some darker green echo that is moving from the south into that area.
Q. And the next page shows what time?
A. This shows 4:07 p.m., five minutes later.
Q. April 17, 1995.
A. Yes.
Q. All right. Again, if we could go to the Junction City area. What does it show?
A. The same thing. Generally light rain over that, at that area, continued south to north movement of these echoes.
Q. What do these white areas mean here?
A. Those are areas that have no echo, and there is probably no

precipitation in that area.
Q. All right. The next page is 4:12?
A. That's correct.
Q. April 17?
A. Yes.
Q. All right. And going to Junction City, what is shown here?
A. The same as on the previous maps.
Q. And 4:18? I'm sorry, 4-17. The time is 4:18, is it not?
A. Yes.
Q. The next page?
A. The same radar image. This would be 4:18 p.m. Central Daylight Time on the 17th of April, 1995.
Q. And again drawing your attention to Junction City, what do we see there?
A. Continued light rain shower activity, probably over that area at that time.
Q. Are there any other records which you could review that would provide even more information?
A. It's possible that there is another data set that would have some precipitation records from them, but that data set is . . . is -- takes a while to compile. And it probably could be obtained; I would have to investigate it.
Q. So you don't know whether it would or not?
A. I do not know.

MR. JONES: Nothing further.

Thank you, your Honor.

THE COURT: Mr. Hartzler.

MR. HARTZLER: Thank you, your Honor. May I just address from the side of the podium?

THE COURT: Sure.

CROSS-EXAMINATION

BY MR. HARTZLER:

BY MR. HARTZLER:
Q. I'm going to have to ask you some questions in generally layman's terms here. On that sliding scale of white to black, is there a cutoff point where you might characterize it as umbrella weather, what's a heavy downpour, canceling baseball games and things of that sort? When do we get into that territory?
A. Let me look at the scale.
Q. Okay.
A. Heavy downpour?
Q. Heavy downpour.
A. Heavy downpour would be into the orange or red.
Q. Okay. And so it lightens as you move up the scale --
A. That's correct.
Q. -- in a reduced color toward the white?
A. That's correct.
Q. So mist or something of that sort would be reflected as -- well, I assume the light rain, it could be comparable to a mist falling from the sky; is that fair?

A. No, it's not. In weather observing, we are careful to try to make distinctions between mist, drizzle, rain, rain showers; and there are definitions for those different categories.
Q. Okay. Well, here's really what I'm getting at. Everyone in this room has seen a videotape from that day with people coming in and out of a restaurant, and I'm afraid maybe you haven't seen that.
A. No, sir.
Q. And would you expect those people under the circumstances that you see in these records to be carrying umbrellas?
A. It's possible that they could have been.
Q. Well, let me just tell you that I didn't see any umbrellas. Nobody's carrying umbrellas, and there are quite a number that come and go in the restaurant. So take that into your consideration, a large number of people come and go during the hours that you've talked about not carrying umbrellas. And they don't look like they have water on them, either. Does that give you some impression as to what kind of precipitation we're talking about on this day?
A. I think that it's consistent with what I'm estimating in that area.
Q. Okay. Okay. Meaning it is not by any means a heavy rain or even a steady rain throughout the day?
A. It is not a heavy rain.
Q. And in terms of the language that you use with Mr. Jones,

you said -- use a phrase -- asked you about repeatedly that I'm not familiar with, but that means they don't use it on the weather station. You said "the longest period in which rain did not stop." I take it that does not mean a steady downpour, a steady rain through the day?

a steady rain through the day?
A. That's correct, it does not mean that.
Q. So it could mean that it rains for a little while, there's a break in the rain -- or even if it's a light rain, it would be a light rain for a little while, stops, continues a little bit later, and that's characterized as this entire -- one area you said had 12 hours I think of -- it's not continuous rain, it's just in which there is no precipitation of any sort; is that right?
A. When we report rain as opposed to rain showers, those are two different categories of precipitation.
Q. Okay.
A. If rain is observed and reported on these forms, it does mean continuous. It can change intensity, but it did not stop. Rain showers, on the other hand, which are a different observed category, imply that they can begin and end sporadically but for very short time periods.
Q. I see. Okay. Well, for the area that had the 12 hours or really it's 11 hours, 59 minutes, of -- I would think you would say nonstop rain, but that's not what you're saying, you're saying the longest period in which rain did not stop. The

longest period in which rain did not stop; right?
A. I based my testimony on the observations that are recorded.
Q. Okay. Well, let me just ask you, really my final question: Did you determine the total precipitation for that day, April 17, for that Marshall area?
A. Yes.
Q. It was less than a half an inch?
A. I would have to look at the records.
Q. Why don't you look down at the bottom of A13, I think it is. I think you'll see .49.
A. I think that's right.
Q. That's less than half a inch for the entire --
A. We're talking about Fort Riley?
Q. Marshall, yeah.
A. That's right. They reported .49 for the calendar day of the 17th of April, that's right.
Q. Okay. Less than a half an inch for the entire day?
A. That's right.
Q. During that same calendar day is that 12-hour period of time in which rain does not stop?
A. Yes.
Q. Okay.

MR. HARTZLER: Nothing further. Thank you.
THE WITNESS: Yes.
THE COURT: Any redirect?

MR. JONES: Yes, sir.

REDIRECT EXAMINATION

BY MR. JONES:

Q. Mr. Rockwood, have you ever pulled into a McDonald's or a Hardee's and observed people running from their cars to get inside without an umbrella?
A. Yes, sir.
Q. That's not uncommon, is it?
A. Not for me.
Q. As opposed to somebody that's taking a walk or a hike or a run in the rain?
A. I think that's fair.
MR. JONES: Nothing further. Thank you.
MR. HARTZLER: No recross.
THE COURT: Witness excused?
MR. JONES: Yes, your Honor.
THE COURT: Agreed.
All right. You may step down. You're excused.
Next witness, please.
MR. JONES: Your Honor, Dave Williams is the next witness.
THE COURT: All right. Mr. Williams.
THE COURTROOM DEPUTY: Raise your right hand, please.
(David Williams 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: David R. Williams, W-I-L-L-I-A-M-S.
THE COURTROOM DEPUTY: Thank you.

DIRECT EXAMINATION

BY MR. TRITICO:
Q. Good morning.
A. Good morning.
Q. Are you a special agent with the Federal Bureau of Investigation?
A. Yes, I am.
Q. How long have you been a special agent with the Federal Bureau of Investigation?
A. Since May of 1982.
Q. Prior to joining the Federal Bureau of Investigation, did you attend college?
A. Yes, I did.
Q. Where?
A. For my bachelor's degree, I attended Mansfield State University in Mansfield, Pennsylvania.
Q. And what is that degree in?
A. Biology.
Q. And when did you graduate from Mansfield State University?
A. 1975.
Q. And have you attended any other institute of higher

education?
A. Yes, I have.
Q. And where?
A. George Washington University in Washington, D.C.
Q. And did you obtain a degree from George Washington

University?
A. Yes, I did.
Q. And what was that degree?
A. For master in forensic science.
Q. When did you obtain that degree?
A. I believe it was in 1981.
Q. And have you attended any other institute of higher education?
A. No, I have not.
Q. Did you obtain these degrees prior to joining the Federal Bureau of Investigation?
A. The bachelor in biology, I did. The master of forensic science I earned while working for the FBI.
Q. And when you joined the Federal Bureau of Investigation, did you go through the FBI Academy, if that's what it's called?
A. I first joined the FBI in 1976, in a nonagent capacity and worked with the bureau for five years, roughly, and then in 1982 was afforded the training all special agents are afforded in Quantico.
Q. What was your job duties when you were a nonagent?

A. I began with a portion of the computerized criminal history section in the Bureau, coding rap sheets, criminal histories, and then transferred into the Evidence Control Center within the laboratory division at headquarters in Washington. For approximately nine months, I worked in Evidence Control and then transferred into the Explosives Unit as a physical science technician, where I worked from approximately 1979 until May of 1982.
Q. When you went to the academy?
A. That's correct.
Q. When you finished your training at the academy, did you return to the lab, or did you become a regular special agent for a period of time?
A. I became a field agent, yes.
Q. How long were you a field agent?
A. From -- after graduating or going through the academy in August of 1982, until October of 1987, when I returned back to the laboratory.
Q. Now, the training that you received at the academy to become a special agent did not entail curriculum specific to the FBI lab; is that fair?
A. No --
Q. There may have been classes that dealt with laboratory science, but not specific is what I'm talking about.
A. That's correct.

Q. Now, when you returned to the lab after your stint as a special agent, you did not return to the FBI Academy for specific training in laboratory practices; is that correct?
A. That's correct.

A. That's correct.
Q. You did have some training at the lab; fair?
A. Yes.
Q. And who was your training agent or supervisor, if you will?
A. My supervisor at the time was James Christopher Ronay.
Q. And is that the person who trained you at the lab?
A. No. I trained under the tutelage of senior examiners in the laboratory from many different units.
Q. Who were they, if you recall?
A. Within the Explosives Unit was James Thomas Thurman, Allen Jordan, Paul Shrecker, Rick Hahn. In other units, Firearms, Hairs and Fibers and such.
Q. You trained in the Firearms Unit?
A. Well, I did train to a point to become a tool marks examiner for the laboratory.
Q. How long -- how long in the training process did you go in the Firearms and Tool Marks Unit? Is that what it was called then?
A. Yes, that's correct.
Q. Okay. How long did you go in that training?
A. For a while from being assigned to the Explosives Unit, that training lasted approximately one and a half to two years.

Q. Training in the Firearms and Tool Marks Unit?
A. Training in that discipline. At the time that I was assigned to the Explosive Unit, qualifying as an explosive examiner, hazardous examiner; and after qualified there and at the same time of that qualification, I worked on tool mark capabilities.
Q. What's a hazardous devices examiner?
A. It is an examiner in the FBI Laboratory that would review evidence submitted to the field from bombing matters in an attempt to identify components recognized -- or recognizable of an improvised explosive device.
Q. Are you referring to shrapnel, pieces of metal, and things like that?
A. Basically fusing systems. Those component parts which make up a bomb.
Q. Okay. You were not trained at the lab in trace analysis and forensic testing for trace analysis; is that fair?
A. Not in that specific discipline. I had an awareness of it.
Q. Now, when you completed your one-year training in the Explosive Unit, do you get a certificate or something like that that says you're now an examiner?
A. Yes.
Q. Did you obtain that same certificate with respect to the firearms and tool marks?
A. Just tool marks.

Q. And you mentioned another area that you were training in.
A. Well, basically within the Explosives Unit, within the

laboratory in general, during the training process, each examiner in training is required to visit with other units and work or work alongside or at least get a recognition of how these other units handle evidence.
Q. All right. Not specific training so that you can go and now examine lands and grooves on firearms necessarily, but a general understanding of what the firearms and tool marks division of the lab is doing; is that correct?
A. That's correct.
Q. And you did that with some other areas of the lab?
A. That's correct.
Q. But you're not certified by the lab, if you will, in those areas; you're certified in the area of hazardous devices examination?
A. I am certified by the laboratory as an examiner of hazardous devices and certified as a tool mark examiner.
Q. And that's your two areas?
A. Yes.
Q. And how long has it been since you practiced the field of tool marks examination?
A. Roughly three months, four months.
Q. Now, you went to Oklahoma City sometime after April 19 of 1995; is that right?

A. It was on April 19.
Q. Okay. What was your position in the lab on April 19, 1995?
A. I was a hazardous devices and explosives specialist for the Explosives Unit and assigned as the crime-scene manager or principal examiner for the bombing crime scene in Oklahoma.
Q. When were you assigned to be the principal examiner?
A. Roughly an hour after the bombing.
Q. Who made that decision?
A. I'm not quite sure. I heard rumors, but I don't know for sure.
Q. Who told you you were going to be the principal examiner, I guess is my question?
A. My unit chief who would assign cases in the Explosive Unit, Tom Thurman.
Q. Now, the principal examiner is the person who coordinates the effort of other areas of the lab and then issues the final report; is that fair?
MS. WILKINSON: Objection: As to form.
THE COURT: Sustained.
BY MR. TRITICO:
Q. What does a principal examiner do?
A. Principle examiner is primarily responsible for coordinating examinations in the laboratory of items submitted to that case. The principal examiner would coordinate dictation from auxiliary examiners or those examiners outside

the field of hazardous field examination, would maintain chains of custody within the Explosives Unit, and basically would be the individual responsible for receiving evidence, inventorying it, assigning it specimen numbers within the laboratory, and basically coordinating examinations, also collecting the dictation from the auxiliary examiners and incorporating that into some type of report.
Q. The final report?
A. There were multitude of reports. In a case such as this, there truly is no final reports.
Q. Now, the reports are all signed by the principal examiner; is that correct?
A. I beg your pardon?
Q. Signed off on by the principal examiner?
A. I don't know if that's a proper terminology. The AE dictation, the auxiliary examiners' dictation, would come to the principal examiner who would incorporate it into a report; and then that report would be given to my specific unit chief, who would review it. Particular copies of that report would be routed to or presented to the auxiliary examiners responsible for any dictation in that report.
Q. The reports that you prepare as a principal examiner, do they identify the auxiliary examiner?
A. In some cases they do, by the laboratory with a laboratory examiner's symbol by the laboratory number.

Q. What's a laboratory examiner's symbol?
A. For example, mine would be YR.
Q. That's not your initials, is it?
A. That's correct.
Q. And people looking at reports from the lab who didn't know what the symbols were would not know who that examiner was, would they?
A. That's correct.
Q. Is that the only -- that's the only method that was used in April and May of '95 to identify the auxiliary examiners in the report; is that correct?
A. No, that's not correct.
Q. What's the other method?
A. In every -- every laboratory report that went out of my unit, including document examiners', I was taking that copy of the report and on each paragraph identifying that particular examiner that prepared information in that paragraph and providing that through -- to the prosecution.
Q. To the prosecution.
A. Prosecution and the OKBOMB task force.
Q. Now, you -- who signs the reports when they go out?
A. The actual copy that's received by the field office is not physically signed. The mail copy or the particular letter copy which goes into the files at headquarters is signed by the unit chief, my immediate supervisor.

Q. Not by the auxiliary examiners who actually performed the testing; right?
A. The auxiliary examiner normally would not sign the report, either. They would prepare their auxiliary report or dictation and present that to their respective unit chief, who would initial and date it.
Q. And then present it to you?
A. And then present it to me, correct.
Q. For inclusion into the report?
A. That's correct.
Q. Now, when you went to Oklahoma City, who was in charge of the scene?
A. I believe Weldon Kennedy was the overall commander of the crime scene.
Q. Is that who you reported to?
A. Yes.
Q. What assignments were given to you by Weldon Kennedy in Oklahoma City?
A. I was basically coordinating between the information gathered during the search of the crime scene and providing that to Weldon Kennedy as information as far as the processing of the crime scene was concerned.
Q. If I understand correctly, what you were was the go-between between the field agents and Mr. Kennedy; is that a fair assessment?

A. Not all the field agents, basically just the processing of the crime scene.
Q. Well, were there field agents processing the crime scene?
A. Yes, there were.
Q. And I guess that was my question. You were the go-between between the field agents processing the crime scene and Weldon Kennedy?
A. Yes, sir.
Q. You didn't participate actively in searches for evidence or collection of evidence; is that fair?
A. That's fair.
Q. How many people from the lab traveled with you to Oklahoma City?
A. I traveled by myself from Tecurda [phonetic], Mexico where I was at the time I was advised of the bombing. When I arrived in Oklahoma City, on the night of the 19th of April, there were, and I would estimate at least four or five members of the Explosives Unit already there.
Q. And who were they?
A. If they were not already there, they came very shortly after.
Q. Sure.
A. That would be Bob Hechman, Wally Higgens, Rick Hahn had transferred out of the Explosives Unit but had come in through Long Beach.

Q. Long Beach?
A. Long Beach, California.
Q. Is that where he was assigned?
A. That's where he was assigned at the time.
Q. Okay.
A. Ignacio Mendizabel, who is a technician in the Explosives Unit. Michael Davitch. And at times others had come through for a short period of time to either transport evidence or to work. Andrew English was also in Oklahoma City.
Q. Anybody else that you know?
A. From that -- that was from the Explosive Units. From other units, Steven Burmeister was present, Ron Kelly, Tom Jordan, who were part of the materials or chemistry unit at the time. To the best of my recollection, that's pretty much it.
Q. Okay. Did these individuals from the lab report to you as the principal examiner in Oklahoma City?
A. At times, yes. Many times it was not possible.
Q. Were they supposed to report to you?
A. Not necessarily.
Q. Were you the person from the lab making assignments for the lab personnel as to their job on any given day?
A. No, I was not.
Q. Who was doing that?
A. Rick Hahn.
Q. Rick Hahn, the person who was no longer at the lab, was in

charge of making assignments for the lab personnel?
A. That's correct.
Q. Who at the lab was assigned to be in charge of the evidence collection in Oklahoma City?
A. That's a difficult question. As being the principal examiner, I would suppose I had something to do with it, but was not directly responsible for the overall coordination of collection and preservation. In essence each team leader was responsible for coordinating the collection and preservation of different areas within the crime scene, providing it to an Evidence Control Center in Oklahoma City, and on a daily basis, regular intervals, would report to Rick Hahn and in turn Rick Hahn or the team leaders would report to me anything of interest.
Q. Each team leader was not a person from the lab, were they?
A. That's correct.
Q. Who from the lab was in charge of evidence collection for forensic analysis purposes?
A. No one person in particular.
Q. Who was coordinating in Oklahoma City the effort to collect for forensic analysis purposes evidence for the lab?
A. I would suspect that would be best answered by Rick Hahn.
Q. You don't know?
A. I don't know. No.

Q. As I reviewed some of the production in this case, I have

noted that your initials appear on virtually every piece of evidence that was accepted at the lab; is that true?
A. That's correct.
Q. You did not personally check in every piece of evidence at the lab, did you?
A. That's correct.
Q. Who -- on whose instruction were your initials placed on every piece of evidence delivered to the lab?
A. By my instruction.
Q. Do you agree that it would be misleading for others to look at that and not know who had checked that evidence in?
MS. WILKINSON: Objection.
THE COURT: Sustained as to the form of that question.
MR. TRITICO: I agree to that.
BY MR. TRITICO:
Q. Would you agree that others looking at the evidence would not know who in fact had checked in any particular item of evidence?
MS. WILKINSON: Objection, again.
THE COURT: Overruled.
THE WITNESS: I would say that's accurate.
BY MR. TRITICO:
Q. Is there a policy at the FBI or a policy at the FBI lab directing that the principal examiner's initials be placed on evidence as opposed to the person who actually checked it in?

A. To the best of my knowledge, I'm not sure if there's a written policy; but the understood policy was that individuals working in conjunction with the principal examiner would check in the evidence, physically write the laboratory number and examiner -- and primary examiner symbols on either the evidence or the container the evidence was in.
Q. Now, in this case did Mr. -- was Mr. Mills the person in charge of checking in the evidence?
A. He was one of many.
Q. And was it on your -- was he one of many that put your initials on the evidence that he checked in?
A. Yes, he was.
Q. And he did that on your instructions?
A. Yes, he did.
Q. And the others did that on your instruction?
A. That's correct.
Q. Nowhere on any of the evidence do their initials appear as having been the person who checked it in; is that right?
A. To the best of my knowledge. That's correct.
Q. Now, in preparing the reports that went out, if I understand your testimony correctly, you gathered from the unit chiefs -- for instance, metallurgy is a part of the lab; right?
A. Metallurgy is a part of the laboratory, yes.

A. Metallurgy is a part of the laboratory, yes.
Q. And as the principal examiner, you would gather the dictation from auxiliary examiners that performed metallurgical

analysis in this case and prepare the report based on your review of that analysis; is that fair?
A. Gather is, in my opinion, not the word to use. The AE dictation was presented to me in the Explosives Unit.
Q. Okay. Well, I'm not arguing that point. Maybe I didn't say it very artfully.
But you were the one that would analyze those reports and then put them in the form of a report; right?
A. That's correct.
Q. You didn't just take the auxiliary examiner's metallurgical report and sign off on it and send it up; is that right?
A. That's correct.
Q. Would you agree with me that without having training in these specific areas, that -- for instance, metallurgy, you don't have any training in metallurgy; is that right?
A. That's correct.
Q. Would you agree with me that you can't write a proper and full report on metallurgical examinations without having had the training in that specific area?
A. I agree.
Q. And that would be the same for paint analysis?
A. That's correct.
Q. DNA analysis?
A. Correct.
Q. Fingerprints?

A. Correct.
Q. Tire tread analysis?
A. That's correct.
Q. And any other areas of the lab that you haven't been specifically trained in; right?
A. That's right.
Q. Now, did you have some discussions with Dr. Fred Whitehurst regarding paint analysis on Q507?
A. I don't recall specifically on paint analysis, but we spoke on other subjects.
Q. Did you have some discussions with Dr. Fred Whitehurst about the protocols with respect to paint analysis in this case?
MS. WILKINSON: Objection, your Honor: Relevance if it's not to Q507.
THE COURT: What's the relevance?
MR. TRITICO: Well, it is relevant to Q507. I was just trying to remind him of the conversation.
THE COURT: Well --
MR. TRITICO: I'll move to more specific.
THE COURT: All right.

THE COURT: All right.
BY MR. TRITICO:
Q. Did you tell Dr. Fred Whitehurst not to analyze Q507 for paint analysis because it had been found by a citizen and was of no evidentiary value?

A. I don't recall ever saying that to Whitehurst.
Q. Have you said it to somebody else?
A. I don't recall ever saying that to anyone else.
Q. Is it true, sir, that Q507 was found by a citizen and not by Mr. Ron Kelly?
A. I don't know that answer.
Q. Were you present when Q507 was collected?
A. No, I was not.
Q. Were you present when Q507 was delivered to the Evidence Collection Center in Oklahoma City?
A. No, I was not.
MR. TRITICO: May I have a moment, your Honor.
THE COURT: Yes.
BY MR. TRITICO:
Q. Do you understand that the article known as Q507 is the article in which Mr. Burmeister found crystals on?
A. Yes, I am aware of that.
MR. TRITICO: I thank you, sir. I'll pass the witness.
THE COURT: Miss Wilkinson, do you have some questions?
MS. WILKINSON: Yes.

CROSS-EXAMINATION

BY MS. WILKINSON:
Q. Good morning, Mr. Williams.

A. Good morning.
Q. As principal examiner, would it be fair to say that in large part your duties in this case were administrative when you got back to the laboratory?
A. Yes, in a large part.
Q. And you had quite a bit of debris that you recovered from the Oklahoma City crime scene; is that right?
A. Yes, ma'am.
Q. Over 7,000 pounds of debris?
A. Yes, ma'am.
Q. And would it be fair to say that it would be appropriate in the laboratory to have your evidence technician assist you in checking in all of that evidence?
A. Yes, ma'am.
Q. When you directed Mr. Mills to put your initials down, did he do so in a fashion that was supposed to replicate your signature or just to indicate that this evidence had come in through you, the principal examiner?
A. Just that I was the principal examiner on that evidence.

Q. In fact, when you reviewed specific evidence in this case, did you also initial either the item or the evidence bag that contained the item?
A. If it already had my initials on it, it was not necessary. Although, when I reviewed every piece of evidence within the notes pertaining to that item, I initialed those notes.

Q. And is your initials on those notes different from the initials that Mr. Mills placed on the bag?
A. You mean physically?
Q. Does it look different?
A. Yes, it does.
Q. Now, the purpose for putting your initials and the laboratory number on each piece of evidence is for chain of custody; is that correct? In part?
A. In part, yes.
Q. And is it also for you to determine what items have come into the lab for further testing?
A. Yes, it has.
Q. Now, when you send these items to different auxiliary examiners, as you call them, for testing, are you aware of whether they mark those items with their initials to indicate that they have reviewed that piece of evidence?
A. Yes, normally they would, yes.
Q. For example, when Agent Burmeister reviewed the clothes, are you aware that he put his initials on each piece of evidence?
A. Yes, I'm aware of that.
Q. Now, after an auxiliary examiner does an examination of a piece of evidence and they prepare dictation, as you call it -- which I understand is their report?
A. That's correct.

Q. And they present that to you after it's been approved by their supervisor; is that right?
A. That's correct.
Q. And when you receive that and you incorporate it into reports that got sent out to the task force and to the defense, did you incorporate it in the form the way the auxiliary examiner provided it to you?
A. Yes, I did.
Q. So you don't do any further analysis of their examinations before you write them into the reports; is that right?
A. Not of their examinations, that is correct.
Q. So if there was a metallurgy report, you wouldn't change that report in any substantial way when you incorporate it into your reports; is that right?
A. That's correct.
Q. And that's why you're not testifying as to these different areas of expertise; is that correct?

A. That's correct.
Q. I take it from what you told Mr. Tritico that you have no personal knowledge about how Q507 was recovered from the scene and how it came to be in the laboratory; is that right?
A. Only what I've heard from individuals.
MS. WILKINSON: No further questions, your Honor.
THE COURT: Any follow-up?
MR. TRITICO: Yes, your Honor.

THE COURT: All right.
REDIRECT EXAMINATION
BY MR. TRITICO:
Q. Would you agree with me that it would be simpler to have the person who checks in the evidence place his own initials on it?
A. No, it would not be more simple.
Q. That way you would know who checked it in if a problem arose later with respect to, for instance, contamination, would you agree with that?
A. I suppose that would work, yes.
Q. Now, there was approximately 7,000 pounds of evidence collected in this case, is that right, maybe a little more?
A. That's correct.
Q. And all of that that made its way to the lab has your initials on it; is that right?
A. Would you repeat that, please?
Q. All of that evidence that made its way to the lab has your initials on it; is that right?
A. Most all of it, yes.
Q. If somebody came to you and said I think Q7283 may have been contaminated when it was checked in, Special Agent Williams, who checked it in, you wouldn't know, would you?
A. With -- when you get up into Q numbers that high, there were a minute number of people handling that evidence. In most

cases, there were less than ten. Each individual likely would be able to identify their handwriting.
Q. My question was you wouldn't know, would you?
A. Not without some investigation.
Q. Now, you testified earlier that on the reports that you provided, you noted on the report, the final reports by name or initials or something the auxiliary examiners who worked on that particular item; is that correct?
A. That's correct.
Q. Let me show you, sir, what's been marked for identification purposes only, sir, as McVeigh Exhibit J371.
MR. TRITICO: May I show this to counsel, your Honor?
THE COURT: Yes.
MR. TRITICO: May I approach?
THE COURT: Yes.
BY MR. TRITICO:

BY MR. TRITICO:
Q. You have in front of you what's been marked for identification purposes only as McVeigh Exhibit J371; is that correct?
A. That's correct.
Q. That's a report from your laboratory that was produced in this case; is that right?
A. That's correct.
Q. Nowhere on that document does it identify the auxiliary examiner who performed the examinations in this case, is that

right, with respect to that report; is that right?
MS. WILKINSON: Objection, your Honor: The document's not in evidence.
THE COURT: Well, I suppose this is foundation to see whether it becomes relevant.
MS. WILKINSON: Okay.
THE WITNESS: May I look at this?
THE COURT: Yes.
THE WITNESS: Within this report, there are a list of numbers --
BY MR. TRITICO:
Q. It's not in evidence, so please hold it down.
A. All right. On this report in the upper right-hand corner are laboratory numbers with examiner symbols after. At different points within this laboratory report different examiners have dictation in here. For example, tire impressions and paint exams.
Q. Yes, sir.
A. And on -- right after these laboratory numbers are lists of symbols of examiners. These examiners' symbols relative to that dictation are present on the front of this report.
Q. That's with the symbols that we talked about earlier that are not their initials; is that correct?
A. That's correct.
MR. TRITICO: Thank you. I'll pass the witness.

THE COURT: Any other questions?
MS. WILKINSON: Just two, your Honor.

RECROSS-EXAMINATION

BY MS. WILKINSON:
Q. Agent Williams, when you've been working on this case, did you prepare a list of those symbols and then the names of those people that use the symbols in the laboratory?
A. Yes, I did.
Q. And did you provide those to the defense -- did you provide them to the prosecution?
A. I provided them to the task force, yes.
Q. And are you aware that they were turned over to the defense?
A. I'm not aware.

MR. TRITICO: Objection to the question.
THE COURT: Sustained.
BY MS. WILKINSON:
Q. You said that when evidence comes into the laboratory and you were trying to check for the chain of custody, that you could determine who checked it in by reviewing that handwriting with others; is that correct?
A. That's correct.
Q. Did you also keep a chain-of-custody log for evidence that comes into the laboratory?
A. Yes, ma'am.

MS. WILKINSON: No further questions, your Honor.
MR. TRITICO: I have nothing further at this time, if he may remain on call.
THE COURT: All right. You may step down now. You may be recalled.
We'll take the morning recess at this point, members of the jury, for our usual 20-minute break; and of course the rules haven't changed, they still remain that you must continue to avoid discussion of the case with other jurors and all other persons and that you can keep open minds, yourselves, and avoid anything outside of the evidence which would possibly contaminate your views.
So you're excused now for 20 minutes.
(Jury out at 10:14 a.m.)
THE COURT: We'll be in recess.
(Recess at 10:15 a.m.)
(Reconvened at 10:33 a.m.)
THE COURT: Be seated, please.
Do counsel wish to approach?
(At the bench:)
(Bench Conference 116B2 is not herein transcribed by court order. It is transcribed as a separate sealed transcript.)

(In open court:)
(Jury in at 10:35 a.m.)
THE COURT: Members of the jury, before we resume, I did get a change -- and you may have noticed the wind tunnel that we were in this morning, the noise and also the blower was blowing. It seemed to me to be excessively; and I asked that some change be made, and the change has been made. Now it's shut off for -- until they can get to fixing it during the noon recess. It could get a little warmer here, but at least we won't have that constant wind noise, which you may have found, as I did, irritating.
The comforting part of it is that it's all controlled by a computer.

Next witness.
MR. TRITICO: Dr. Fred Whitehurst.
THE COURT: All right.
THE COURTROOM DEPUTY: Would you raise your right hand, please.
(Frederic Whitehurst affirmed.)
THE COURTROOM DEPUTY: Would you have a seat, please.
THE WITNESS: Yes.
THE COURTROOM DEPUTY: Would you state your full name for the record and spell your last name.
THE WITNESS: Yes. My name is Frederic William Whitehurst. My last name is spelled W-H-I-T-E-H-U-R-S-T.

THE COURTROOM DEPUTY: Thank you.
THE COURT: Mr. Tritico.

DIRECT EXAMINATION

BY MR. TRITICO:
Q. Dr. Whitehurst, how are you employed?
A. I'm a supervisory special agent of the FBI.
Q. And you're appearing here today under subpoena from Mr. McVeigh and his defense team?
A. Yes, sir.
Q. Would you describe for the ladies and gentlemen of the jury briefly your educational background. Where did you go to college?
A. Yes. I got a bachelor of science degree in chemistry from East Carolina University in 1974. I received a doctorate from chemistry in Duke University in 1980. I received -- well, I completed a couple of years of post-doctoral research at Texas A & M University.
Q. What was your post-doctoral work at Texas A & M?
A. X-ray crystallography, theoretical applications.
Q. I'm sorry?
A. X-ray crystallography.
Q. What is that, briefly?
A. Some solid materials are ordered; they're not random. The atoms that are in them are ordered. We use various and sundry pieces of equipment to find out what that order is. And I also

completed a law degree at Georgetown University.
Q. With respect to your law degree, did you sit for the bar in any state?
A. No, I haven't.
Q. You do not practice law, but you do have a doctorate of jurisprudence in law; is that correct?
A. Yes, I do.
Q. Have you had any practical experience in your lifetime with the use of explosives?
A. Yes, sir, I have.
Q. And when did you obtain this practical experience?
A. I spent three years with combat units in Vietnam.

A. I spent three years with combat units in Vietnam.
Q. And what were you assigned to in Vietnam?
A. Well, I spent about six months in the infantry. I was a mortarman, a rifleman. I worked a lot with explosives, assisting engineers in blowing up tunnels, blowing down trees, that sort of thing.

I spent two and a half years in military intelligence. I went to the field quite often. I had a lot of -- of experience with explosives being used very close to me.
Q. With respect to the explosives, have you during Vietnam -- did you participate in or explode things, if you will, on few, or many occasions?
A. Many occasions.
Q. Since you left the military, would you briefly describe for

the ladies and gentlemen of the jury your work history with respect to chemical trace analysis, or explosives trace analysis.
A. Yes. I -- excuse me. I entered the FBI Laboratory in 1986, and I underwent about 13 months of training to qualify to be a forensic chemist with a specialty in the area of explosives and explosive residue analysis.

And then I -- between August of 1987 and June of 1994, I worked cases, criminal cases and other cases in explosives, explosive residue analysis.
Q. Prior to 1986, when you joined the lab, were you a special agent for the Federal Bureau of Investigation?
A. Yes, I was.
Q. Is that somebody working in the field conducting investigations?
A. Yes.
Q. And what year did you join the Federal Bureau of Investigation?
A. It was in 1982.
Q. And I believe you testified that you joined the lab in 1986; is that correct?
A. Yes, that's correct.
Q. What unit were you assigned to in the lab when you first joined the lab?
A. To the Materials Analysis Unit.

Q. And in 1986, was that the unit of the lab that conducted trace analysis, explosives trace analysis?
A. Yes, it was.
Q. Is that the same thing as explosives residue analysis?
A. Yes.
Q. Has -- during the time that you've been employed at the FBI lab, has the trace analysis section, if you will, always been assigned to the Materials Analysis Unit?
A. Well, there is many types of trace analysis. The explosives and explosives residue analysis was assigned to the

explosives and explosives residue analysis was assigned to the materials analysis until, oh, I don't know -- I think it's maybe a couple of years ago now.
Q. Where did it go?
A. It was moved over to the Chemistry/Toxicology Unit.
Q. Now, when it was moved to the Chemistry/Toxicology Unit, did that require the members of the lab to physically move the equipment, or was this a flowchart change?
A. It was a flowchart change.
Q. Now, are you a member of any professional organizations?
A. Yes, sir.
Q. Which ones?
A. I belong to the American Chemical Society, the Federation Societies of Coatings Technology, Pyrotechnic Guild International that I belong to. Sigma Psi Scientific Honor Society, the International Society of Explosives Engineers.

That's all I can remember right now, sir.
Q. Do you from time to time attend international symposiums in the field of chemistry and/or explosives residue analysis?
A. Yes, sir, I do.
Q. Do you do that on few, or many occasions?
A. Excuse me?
Q. You do that on few, or many occasions?
A. I'd say on a few occasions.
Q. And do you regularly read journals and treatises on the subject of explosives trace analysis?
A. Yes, I do.
Q. And have you had occasion to contribute to those journals and/or treatises as a contributing author or editor, if you will?
A. Yes, but not very often.
Q. I'd like to show you, sir, what's already been introduced into evidence as McVeigh Exhibit J400.
A. Excuse me. I've got J444, also. Am I supposed to?
Q. We'll get to that in a minute.
A. All right.
Q. J400, it has been represented here, are the protocols that were in effect in the FBI lab from April 1, 1995, to present, which, according to the letter, would have been December 19, 1996.
My question to you, Dr. Whitehurst: Are those

protocols?
A. Some of this that I'm looking at is data that was generated to help us understand a piece of equipment that we had in the laboratory that was a new piece of equipment.
That is -- that does not fit within my understanding of what a protocol is.
Q. Do you recognize some of those documents?
A. Yes. My handwriting is on them, and some of them are

documents that I wrote.
Q. Down at the bottom right-hand corner of each document should be a number. Can you identify the document that you wrote that make up Exhibit J400?
A. There is a stamp on the bottom that says 000895.
Q. 895?
A. Yes.
Q. Okay. Any others that you wrote?
A. 000896 is something that I believe I generated.
000897, 898, and part of 899, 900. I wrote 901, 902, 903, 904, 905. I generated 906 in conjunction with Mr. Burmeister and Monica Knuckles in the laboratory. Let's see. Yes.
I generated, I believe, 921, 922, 923 -- yes, 923, 924 --
Q. Let's talk about some of these, Dr. Whitehurst.
A. Yes.

MR. TRITICO: May I have the ELMO?
BY MR. TRITICO:
Q. Looking at page 000895 --
A. Yes.
Q. -- now, this is the first one that you identified as something that you had written; is that correct?
A. Yes.
Q. What is this?
A. It appears to be laboratory notes associated with the testing of the echo gas chromatography electron capture detector instrument that we had in the laboratory.
Q. Is this a document that you prepared to be used as a written protocol for the FBI lab?
A. No, sir. It was -- it was the notes from the results of testing of the instrument.
Q. And 000896: Does this have to do with the same machine?
A. Yes, it does.
Q. Is this -- was this prepared, this chart printed off for use as a written protocol, for the FBI lab?
A. No, sir.
Q. And 897: Is that part of the same document?
A. That's correct. And --
Q. And 898?
A. Yes.
Q. And I guess 899 is also a part of the same document. Is

that correct?
A. Yes. It appears to be.
Q. Are any of the documents or the page numbers that you've identified incorporated within McVeigh Exhibit J400, the documents that you wrote -- were they written to be written protocols for the FBI lab?

A. Yes, some of them were.
Q. Which ones?
A. The description of analysis on 901 was not. Okay. It goes through after that.
Q. I'm sorry. 000901?
A. Yes. That says what we do, but it wasn't to be part of a protocol.
There is a document in the back that starts at 922 or 921 -- excuse me -- which was meant to be the initial attempts at a protocol.
Q. Is this the page you're talking about? Look at the screen there, please.
A. Yes, that's correct.
Q. Now, I believe I understood you to say a moment ago that this was the initial attempt at a written protocol?
A. Yes.
Q. What do you mean by that?
MS. WILKINSON: Your Honor, could I object just as to timing so we can figure out what time this protocol

Mr. Whitehurst or Dr. Whitehurst --
THE COURT: All right. Let's establish time.
BY MR. TRITICO:
Q. When did you write this?
THE COURT: What page is this?
MR. TRITICO: I'm sorry, your Honor. It's 000922.
THE COURT: Thank you.
BY MR. TRITICO:
Q. When did you write this?
A. Sometime back in the early 90's. I think it was in 1991 or 1992. I don't know for sure.
Q. Now, if I understood your testimony a moment ago, this was your attempt at a protocol?
A. Yes. Yes, sir.
Q. What do you mean by that?
A. We became aware that the flowchart that we were using didn't have enough specific instructions in it. Somebody couldn't just review that and see what we had done; and we realized that, you know, real scientific protocol needs to be more specific than the flowchart was. So Mr. Burmeister and I sat down to try to build a protocol to -- you know, to flesh out that -- that flowchart that we were using. And, you know, to the best of my memory, this is part of that attempt.
Q. Did you complete the project?
A. No. Not during my tenure.

Q. Look at the very first page of McVeigh Exhibit J400 for me, please.
A. Yes.
Q. The first sentence of this says, "The enclosed materials reflect the protocols and procedures in effect from April 1,

reflect the protocols and procedures in effect from April 1, 1995, to present." And the date of this letter is December 19, 1996. Do you see that?
A. Yes, I do.
Q. Do you view that as an accurate statement?
MS. WILKINSON: Objection, your Honor. I don't believe that Mr. -- Dr. Whitehurst was a member of this unit during that time period.
THE COURT: Well, he's read the attached. The question goes to the attached; is that correct?
MR. TRITICO: Yes, sir.
THE COURT: Overruled.
BY MR. TRITICO:
Q. Do you view that as an accurate statement?
A. Well, some of these documents are not to my understanding part of a protocol. They're just laboratory notes. Some of these documents do represent the -- I don't know the state of April 1, 1995. I wasn't working this April 1, 1995; but they -- if that's all they had for a protocol, then that represents -- that represents the protocol that was used, sir.
Q. However, the documents that you've identified that we've

discussed in your view as a scientist are not protocols; is that correct?
A. They don't satisfy the protocol requirements of the organization that I work for.
Q. What do you mean by that?
A. Well, the FBI has a standard operating procedure for making protocols, for writing protocols which they've developed in the last while. And I know -- I'm the author of some of this stuff, and I know that these don't satisfy those requirements that I've read.
Q. Now, let me talk to you for a minute about contamination studies at the FBI lab while you were there.
Have you ever conducted a contamination study at the FBI lab?
A. Yes.
MS. WILKINSON: Objection, your Honor, to relevance and timing.
THE COURT: Well, we need foundation to make it relevant, so . . .
BY MR. TRITICO:
Q. How many studies have you conducted?
A. I've conducted a number of studies.
Q. When was the last one?
A. In May of 1995, I believe.
Q. What was that study? What were you doing?

A. I was trying to determine if there were organic explosives -- particular types of organic explosives in the laboratory in various places that I felt at the time were

important to the handling of explosive residues evidence.
Q. Did you complete the study?
A. Yes.
Q. What were your results?
A. We found -- I think we took 50 swabs. I'd have to look at the study myself, but we found that there were some places that had -- there were four or five, maybe -- yes, that had some organic explosives.
Q. Where were those places? Do you recall?
A. The best I can recall now is they were in areas of the Explosives Unit's evidence-handling area and evidence-storage area.
Q. If you know, is that the area where evidence is checked in when it's brought into the lab?
A. Yes.
Q. Yes, you know, or yes, it is?
A. Yes, that's correct.
Q. Okay. What contamination did you find in those areas?
A. We found residues of PETN and residues of RDX.
Q. In April and May of 1995, did the FBI lab have a procedure for regular monitoring with respect to contamination in the Explosives Units?

A. Not to my knowledge.
Q. What efforts, if any, were taken, other than the contamination study that you testified about, to determine the existence of contamination in the Explosives Units?
A. I was told about a study that --
MS. WILKINSON: Objection, your Honor.
THE COURT: Sustained.
BY MR. TRITICO:
Q. Do you know of any other efforts that were taken to determine the existence, if any, of contamination other than the one you just testified about in 1995?
A. Can you repeat that again, sir.
Q. Sure. Other than the contamination study that you did that you just testified about, are you aware of any other testing in and around April and May of 1995 to determine the existence of contamination?
THE COURT: In the entire laboratory?
MR. TRITICO: In the Explosive Units, is what I'm talking about.
MS. WILKINSON: Your Honor, he's saying "Explosive Units." I'm not sure what he's referring to in the plural.
THE COURT: Let's clarify.
BY MR. TRITICO:
Q. How many units of the lab handle explosives?
A. Um --

Q. Let me ask it this way.

A. Very many would, because evidence -- Should I wait?
Q. Let me ask you this: Does the Explosives Unit -- is that the area that in April and May of 1995 that would have checked in evidence from the Oklahoma City case?
A. I believe so.
Q. The chemistry/toxicology area: Was that the area of the lab that conducted explosives trace analysis in April and May of 1995?
A. Yes.
Q. And the Explosives Unit would have conducted their testing, if you will, on other evidence from the Oklahoma City case in April or May of 1995; is that correct?
A. That would be standard procedure.
Q. Are those the two areas -- and the Materials Analysis Unit: Would they handle certain evidence of an explosives nature with respect to Oklahoma City in April and May of 1995?
A. Yes, they would.
Q. Those three areas: Are you aware of any other testing for contamination other than the one that you did in -- I believe you said May of 1995?
A. During that period, no.
Q. Are you aware of any monitoring performed by the FBI lab or the FBI in those three units of the lab in April or May of 1995 to determine the existence, if any, of contamination?

A. No, sir.
Q. Why is it important in your mind to determine if there is contamination in the lab in those three areas?
A. If we're processing evidence and we are contaminated ourselves, then we don't know whether our finding of explosives residues on material is a result of our contaminating the material ourselves or the result of the explosives residue having been on the evidence before it ever got to us.
Q. Can you see explosives residue?
A. Sometimes.
Q. Can you generally?
A. I don't know that I've done a study. There are explosive residues that are invisible. There could be explosive residues on my hand right now, sir, that you just couldn't see.
Q. Can explosives residue travel around?
A. It can and does.
Q. And have you ever conducted any studies wherein you determined that explosive residues had traveled around and contaminated other items?
A. The FBI has.
Q. Have you participated in those?
A. Yes, I have. I have looked --
THE COURT: I don't know what you mean by "traveled around." That doesn't sound very scientific.
MR. TRITICO: It probably wasn't, your Honor.

BY MR. TRITICO:
Q. Can it move around in the air?
A. Yes.
Q. Some explosives residues?
A. Yes, I'm aware that some can move around in the air.
Q. Can explosives residues be transferred by people like on my hands or clothes or shoes?
A. Yes, it can.
Q. How does that happen?
A. You touch the explosive. A study we did at Quantico, where you touch the individual and the individual touched the explosive, went and touched door handles throughout our Quantico facility -- and I think it was up to 30 door handles that they could find explosives on it. Don't quote me on that number. But I've seen the studies, also, where a thumb is put on C-4 plastic explosive; and for 100 thumb prints, you can still find explosive residue.
Q. Can explosives residue travel from, say, box to box?
A. Some can.
MS. WILKINSON: Your Honor, could we talk about a specific residue? Explosive residue and the timing.
THE COURT: Well, you can on cross. This is permissible direct.
BY MR. TRITICO:
Q. Can explosives residue travel from box to box?

A. There are explosive residues that have high vapor pressure, like nitroglycerine and ethylene glycol dinitrate that can.
Q. What does high vapor pressure mean?
A. The material evaporates. Just molecules of nitroglycerine, for instance, evaporate, travel through objects over a period of time.
Q. How about explosives residue traveling from item to item within a box?
A. If you're dealing with, again, explosives residue that have high vapor pressures.
Q. Did you ever conduct a study wherein you used blue jeans?
A. Yes, I did.
Q. Can you tell me about when -- well, when did you perform that study?
A. We started in 1992, I believe.
Q. And what was the purpose of this study?
MS. WILKINSON: Objection, your Honor, as to relevance, timing.
THE COURT: Overruled.
BY MR. TRITICO:
Q. What was the purpose of this study?
A. Initially what we were trying to do was find out how long ethylene glycol dinitrate would last on blue jeans. So it was going to be a multiyear study.
Q. Is that EGDN?

A. Yes, EGDN.
Q. Okay.
A. Excuse me.
Q. So what did you do?
A. We carried, I believe, eight pairs of blue jeans down to the Quantico bomb range and put some aside, blew up an explosive that didn't have any EGDN in it near them and put some others that were hanging up on like a clothesline there and blew up explosives that had EGDN up close to the others. And we tested them to see if EGDN was on them. Then we placed them in plastic bags. We put them all together in a box, cardboard box. We stored the box over a period of time and found that EGDN was on the original blue jeans that had EGDN on them, but it was also on the blue jeans that didn't have the EGDN on them to start out with.
Q. Did you find any other substances on the blue jeans when you tested them later?
A. No.
Q. Did you make any findings with respect to PETN in that study?
A. Yes. One of the things I wanted to do in 1996 -- I believe it was '96 when the study was over -- was to find out if EGDN had come out of the box. And so I did a test on the outside of the box and found PETN, which wasn't -- it was nonsensical.
Q. What do you mean?

A. We hadn't used it. It wasn't an explosive we were using; the box was a brand-new box out of a stack of boxes. It didn't make sense that there was -- I say we found EGDN. The data we had was consistent with the presence -- excuse me -- of PETN being on the box.
Q. On the outside of the box?
A. Yes, on the outside of the box.
Q. Was PETN used in the initial explosion when you started the test?
A. No, it wasn't.
Q. Do you know how the PETN got on the box?
A. No, I don't. It didn't make any sense to me.
Q. Where was the box stored?
A. It was stored on top of some book shelves up over close to the -- close to the ceiling in my office.
Q. How long did you store it there?
A. Four years.
Q. I'm sorry?
A. Four years.
Q. Four years? What is Turbo Vap?
A. It's an instrument that's used to evaporate many containers of solvent all at the same time, and it -- if you want to know if a material is in, say, this pen or whatever this object is, you might immerse it into a solvent and soak out of that pen some material that you're looking for. Well, now you've got

solvent and material. You want to get rid of the solvent so you can analyze the material, and so what you do is blow a stream of gas such as nitrogen into a test tube that you've got the solvent and the material in and evaporate it.
Q. You have -- in April and May of 1995, did you have one of those in the FBI lab?
A. Yes.
Q. Have you ever tested the Turbo Vap yourself for the existence of contamination?
A. Yes, I have.
Q. And when that?
A. It was terribly contaminated.
Q. When. I'm sorry.
A. Oh, when? It was sometime -- I think it was around 1992.
Q. Have you tested it since?
A. No. Not that I remember.
Q. Was there any regular monitoring or testing of the Turbo Vap while you were in the FBI lab?
A. No, no.
Q. What did you find in 1992 when you tested the Turbo Vap?
A. There were a number of explosives on there. I had been processing raw explosives in the Turbo Vap.
Q. What was the policy and procedure of the FBI lab in April or May of 1995 for regular cleaning, if any, of the Turbo Vap?
A. There wasn't one because we abandoned the use of it.

Q. Have you ever known individuals to keep raw explosives in the trace analysis area of the lab?
A. Yes.
Q. Who?
MS. WILKINSON: Your Honor, again, timing.
THE COURT: Yes. Let's be more specific.
BY MR. TRITICO:
Q. April and May of 1995, were you aware of any?
A. Yes.
Q. Who?
A. Mr. Burmeister did.
Q. What did he keep? Do you know?
A. Very small containers of standards, screw-cap vials.
Q. What's a standard?
A. They're known explosives.
Q. Like what?
A. Hexanitrostilbene or RDX or TNT or PETN or -- there is a number of types of explosives. I think we have 15 or 20 of them.
Q. What do you use the standard for?
A. If you run -- if you know what the material is, you run an unknown, you could run the standard to find out what the unknown is. We use the standards for testing equipment that's, you know, if you get a new piece of explosive detection

you know -- if you get a new piece of explosive detection equipment, you want to know could it detect this type of

explosive. We know what is in the jar or in the little bottle, so we use the equipment for that -- I mean the standards for that.
Q. Let me see if I can break that down a little bit. The standard is used when you run an unknown sample through, for instance, a GC/Chem machine so that you have something to compare the charts with against each other; right?
A. Yes.
Q. And you're looking to see with the known standard if it matches up with the unknown sample, then you know if you have identified explosives residue on that unknown sample. Is that fair?
A. Well, it's not -- you don't quite identify it that way, but you know your data is consistent with the same type of material going through the instrument.
Q. In your opinion, should raw explosives like standards be kept in the trace analysis area of the lab?
A. The way those explosives are stored, I -- I'm not that concerned about it. They're handled very carefully, and I don't have a great deal of concern about that.
Q. Have you ever found contamination in Steve Burmeister's work area?
A. We did one time a long time ago.
Q. When?
A. It was in the early 90's, just after Steve came that we

found something.
Q. What did you find?
A. There was an RDX signal off his computer keyboard.
Q. Have you tested his office since you found the RDX?
A. I don't know if -- when we did the test in '95 that it included that office. I'd have to review the test results.
Q. Now, the -- each -- some of the examiners -- you, for instance, and Mr. Burmeister -- had individual offices within the trace analysis area of the lab; is that right?
A. Yes.
Q. And these offices: Did they have locks on the doors?
A. Yes, they did.
Q. Was there a policy or procedure for regular monitoring of each individual office for contamination in April and May of 1995?
A. Not that I'm aware of.
Q. Does the FBI permit tours by the general public through the FBI lab?
A. No longer as far as I understand.
Q. Let me break that down. In April and May of 1995, were tours permitted by the -- for the general public through the FBI lab?

FBI lab.
A. There were tours that came through. Not of the general public. They were special tours that came through.
Q. Through the trace analysis area is what you're talking

about?
A. Yes.
Q. And who generally would be invited into the trace analysis area on these special tours?
A. I've seen lots of different groups, visiting dignitaries from places even like Russia and Czechoslovakia, Japan, Southeast Asia, the Middle East. We have a number of visits from Israelis. Those kinds of people come through.
Q. Foreign dignitaries?
A. Foreign dignitaries. We also have, you know, at times Americans, civilians that come through the lab.
Q. And have you seen -- had occasion to see military personnel on these special tours?
A. Yes, I have.
Q. From the United States, or abroad, or both?
A. Both.
Q. I'm sorry?
A. Both.
Q. Now, does the general public: Are they allowed to tour in and around or around the trace analysis area?
A. No longer.
Q. My questions are only referring to April and May of '95. Okay?
A. Okay.
Q. Were they allowed then to tour around the trace analysis

area?
A. To the best of my recollection, that practice had been stopped before that time.
Q. How soon before?
A. That, I don't know. I know I myself have brought groups as many as 15 to 20 people through the lab.
Q. Members of the general public?
A. Yes.
Q. In April or May of '95, or around that time frame?
A. No. To the best of my recollection, that practice had halted by that time, sir.
Q. Okay. Now, is there a carpeting in the FBI lab?
A. Yes, there is, in a number of places.
Q. I'm talking about the trace analysis area.
A. Yes, there is.
Q. Excuse me. Can you draw me a picture of the interior, a sketch, if you will, of the trace analysis area, if I give you a piece of paper?
A. Yes.
MR. TRITICO: May I approach?

THE COURT: Yes.
THE WITNESS: You want me to go ahead and draw?
BY MR. TRITICO:
Q. Yes. And can you write and me ask questions at the same time?

A. We'll try.
Q. Okay. In April and May of '95, were there locks on exterior doors of the trace analysis area?
A. No.
Q. You want to go ahead and draw?
A. You want me to start drawing?
Q. Go ahead and draw that.
A. Okay. Understand I'm a scientist, not an artist, sir.
Q. Yes, sir.
I just need a sketch, Dr. Whitehurst, not a van Gogh.
A. Yes. It's a rather complex area. I'm sorry. I'm holding you up.
Q. That's okay. Are you through?
A. Well, sure.
Q. If you're not, I want you to finish it.
A. I wasn't sure if that was a hint or not.
Q. Okay.
A. I think that I should be able to explain what I need with what I've got here, sir.
MR. TRITICO: May I retrieve that, your Honor?
THE COURT: Yes.
MR. TRITICO: May I show this --
THE COURT: Will you show it to counsel first?
MR. TRITICO: Oh, yes, I guess I will.
BY MR. TRITICO:

Q. Now, I'm showing you what's now been marked as McVeigh Exhibit J750. Is this the sketch that you drew?
A. Yes, it is.
Q. Would this assist the jury in understanding your testimony about the lab and the egress and the ingress into and from the lab and --
A. Yes, I believe it would.
Q. This is not a Vincent van Gogh drawing, is it?
A. It's not completely accurate.
Q. Okay.
MR. TRITICO: I'll offer McVeigh Exhibit J750, your Honor.
MS. WILKINSON: No objection.
THE COURT: All right. It's received to illustrate the testimony.
MR. TRITICO: Yes, sir.
BY MR. TRITICO:
Q. Now, can you see what I'm pointing at right here?

A. Yes, I do.
Q. What is this?
A. That's a doorway.
Q. Is this the doorway -- the main entrance into the trace analysis section of the lab?
A. It is one of the entrances. On the other corner, there is another entrance.

Q. Over here?
A. Yes, uh-huh.
Q. Is the area that is enclosed in here within the page between these two doors: Does that comprise the trace analysis area of the lab?
A. Well, there is other -- there is other areas in the lab where explosive trace analysis takes place, also.
Q. Is this where the majority of it is done?
A. During my tenure, that's where the majority was done.
Q. Is this the area where you officed when you were at -- in the explosives residue analysis for the lab?
A. Yes, that's correct.
Q. What is this right here that I'm pointing at right here?
A. It's an area that leads through the national automotive paint file area, where the carpet is.
Q. Was this carpet here in April and May of 1995?
A. Yes, it was.
Q. How big is that carpet?
A. I'd say it's 3 or 4 feet wide and maybe 15 feet long. Something like that.
Q. What was the regular practice for cleaning the carpet in this area in April and May of 1995?
A. The facilities management personnel would vacuum it.
Q. Do you have an opinion as to whether or not vacuuming the carpet in the trace analysis area is appropriate?

A. Yes, I have an opinion.
Q. What is that opinion?
A. I think, first of all, it's inappropriate to have the carpet there; and second of all, it's inappropriate to vacuum it with an industrial-grade vacuum cleaner.
Q. Let's break that down. Why is it inappropriate to have the carpet in that area?
A. It's very difficult to really clean and to characterize as to whether it's been contaminated with anything. It acts as an area where individuals that are undefined coming through can walk across and leave materials that we can't -- we can't mop up, we can't clean very often, so that that carpet could be absolutely clean now, and five minutes from now when traffic comes through, it's no longer clean. We just can't monitor it.
Q. What type of traffic would this carpet see? From whom, I'm asking you? Other people in the lab?
A. Other people in the lab, other people in the FBI building

A. Other people in the lab, other people in the FBI building. Just all kinds of people.
Q. Have you had occasion to see people that have come from the bomb range in Quantico walk across that carpet?
A. Yes.
Q. Now, you -- I got past what we were talking about with respect to vacuuming. Why is that inappropriate, vacuuming the carpet?
A. Vacuum cleaners that you normally use around your house

throw a lot of dust out. They vacuum up the big particles, and a lot of dust goes out. In fact, you know if you clean, you know that if you vacuum then you dust, you know because if you vac -- I mean if you dust first, you're going to have to dust again after you vacuum.
Q. What studies while you were -- In or around April or May of 1995, were any studies conducted with respect to this carpet and contamination that you're aware of?
A. I don't know that the study we did actually tested the carpet.
Q. How many times did you see the carpet shampooed while you were in the lab?
A. I don't remember it ever being shampooed.
Q. Now, over here on -- along here are -- I take it offices is what you've drawn. Is that correct?
A. Yes, that's correct.
Q. Are these the offices where the examiners officed?
A. Yes.
Q. One of which was yours?
A. Yes, that's correct.
Q. Which one was yours?
A. I don't know how to point at this thing.
Q. This one?
A. Let me see.
Yes, that's correct.

Q. This was your office?
A. Yes, that was my office.
Q. Take that pen, go underneath the glass onto the screen. You can just put a little X or whatever you want, just right on the screen. There you go.
A. Fascinating.
Q. Which one was Mr. Burmeister's office?
A. It's this one right here.
Q. I can't see it --
A. Excuse me. I apologize.
Q. Thank you. Now, this door you testified a moment ago was not locked; is that right? In April and May of '95?
A. Yes, that's correct.
Q. Were any efforts taken by the lab to control the egress and ingress of individuals who did not work in that trace analysis

area of the lab in April and May of 1995?
A. Yes. I'm aware of a 1991 memo requesting that locks be put on those doors to provide proper security for our evidence and to keep people from going through the area.
Q. And was that done?
A. No.
Q. Do you know why?
A. No.
Q. Do you feel that the doors should have been locked and the egress and ingress of individuals who did not work in the trace

analysis area should have been controlled?
A. Yes.
Q. Why?
A. I've had a concern about chain of custody ever since I got in the lab. We very often don't have a place to store our evidence, so it stays out overnight in the hoods, or even out in the lab. And I don't know how -- I don't know how we can legally justify that to say that evidence was, you know, totally under our control.

I also have a concern that if the door isn't locked, people don't think before they go through it. They don't think, "Am I dirty? Should I not go in there?" You know? And when I mean dirty, I mean, "Am I contaminated with something that shouldn't be in that room?"
Q. What efforts were taken in and around April and May of 1995 to determine if individuals entering the trace analysis area of the lab were contaminated with explosives residue?
A. I don't remember any -- there was no -- there was no procedure of checking people out that came into the lab that I remember.
Q. What efforts could have been taken in and around April or May of 1995 to check individuals for explosives residue contamination?
A. We could have -- well, the efforts could be like what I saw in 1989 in the British lab that I --

MS. WILKINSON: Objection, your Honor.
THE COURT: Sustained.
BY MR. TRITICO:
Q. What efforts could you have taken in and around April or May of 1995 to check individuals for the existence of explosives residue?
A. We could have checked their hands to find out if their hands were contaminated. We could have checked their shoes to find out if their shoes were contaminated. We had an explosives detector; and anybody coming through that area could have been interrogated with that detector, could have been sampled with that detector.
Q. Other than checking their shoes, are there ways that you

could have further protected from contamination with respect to shoes?
A. I understand there is materials that you can put at entranceways, but I've not actually seen that stuff myself.
Q. I'm sorry. I didn't understand what you said.
A. There are materials that you can put in entranceways, sticky materials where you walk over it and your shoes -- you know, stuff that's on your shoes --
Q. Would stick to the mat?
A. Stick to the mat.
Q. How about covering?
A. Yes. There could have been booties put on people.

Q. In your opinion, what is the -- if you have a contamination problem in a lab, what is the most highly contaminated area generally? Do you know?
A. I would expect that it would be where raw explosives and evidence with explosive residues were on it would be found.
Q. My question wasn't fair --
A. Okay.
Q. -- and I don't think it was clear. Floor, wall, table, things like that, in the trace analysis area: What would be the most contaminated area?
A. From what I know about explosives, sir, it would be anywhere.
Q. Okay. What was the FBI's protocol or procedure in April or May of 1995 for testing the floors of the Explosives Unit, Chemistry/Toxicology Unit and the Materials Analysis Unit for contamination?
A. I'm not aware that there was one.
Q. Have you ever personally done it?
A. No. The contamination study that was done in May -- I don't know if swabs were taken off the floor. It's been a long time since that was done.
Q. Do you feel -- do you have an opinion as to whether or not the FBI lab in and around April or May of 1995 should have regularly tested the floors and other areas of the Materials Analysis Unit, the Chemistry/Toxicology Unit, and the

Explosives Unit for contamination?
A. Yes, I believe we should have.
Q. There has been evidence in this case that when Mr. Mills received the -- Mr. McVeigh's clothes, he brought them into the Explosives Unit and put them on the floor. After preparing his table, he put the box onto the table. Do you have an opinion as to whether or not that is an appropriate method for checking in evidence?
A. I think it could lead to a contamination issue with the evidence.
Q. Why?
A. Because the people in the Explosive Unit that go to the

A. Because the people in the Explosive Unit that go to the bomb range come home from the bomb range -- or I've -- you know, I've experienced that where they come back from the bomb range and go into the Explosive Unit area with the clothes they've had on at the range, with the shoes they've had on at the range. There is a high likelihood that they've brought explosive residues back from the bomb range, and so it's -- it, you know -- if you put something on that floor, there is a high likelihood that you're going to pick up some contamination from the floor.
Q. Without taking control samples of the floor on a regular basis or at the time you placed the box on the floor, how would you ever know if you had contaminated that evidence?
A. You wouldn't.

Q. Is packaging evidence, more than one single item of evidence, in a brown paper bag in your opinion an appropriate method for packaging and transporting evidence?
A. It's according to what you want to do with it when you do the analysis. It's according to what your concerns are with the evidence. If you're not concerned about, for instance, is there residue on this and not residue on this one, it wouldn't concern me.
Q. Would you agree that you might not know at the time that you package it?
A. Certainly.
Q. And based on that, would you agree that it would be better to package it separately?
A. Yes.
Q. You're familiar with the explosive PETN, are you not?
A. Yes, I am.
Q. If you know, is PETN used in any other method than a high explosive?
A. Yes, I'm aware that it's used as a medicine, as a component of smokeless powder, gunpowder.
Q. With respect to the medicine, have you checked to see if PETN was used in medicines in the United States in and around 1994 and 1995?
A. Yes, I have.
Q. And what did you find?

A. I found there are a number of products, quite a number of products that have PETN in them. There is quite a number of references out there to medicinal products with PETN in them.
Q. Where did you check? What books or research did you do to find this out?
A. I went to the U.S. Pharmacopeia, to the American Drug=20 Index.
Q. I'm sorry. Slow down. What?
A. The American Drug Index.
Q. What was the first one?

Q. What was the name of --
A. I hope I'm saying it right, sir. I'm a chemist. Pharmacopeia.
Q. Okay.
A. I checked in references that nurses and doctors would use, and I guess four or five of them. I looked in the Merck Index, which is sort of a general reference that people -- that chemists use to find out what are the uses of the drug, what are the characteristics of -- not the drug but the chemical.
Q. And based on that research, you found that PETN was used in certain medicines in the United States in and around 1994 and 1995?
A. I think we need to be specific about that.
Q. All right.
A. I called a couple of -- one particular drug company, and the individual I talked to there said it was commonly used.

The references showed medicines that were -- the names of medicines that I took to be manufactured. I -- you know, they're American medicines, so I would expect they are marketed.
Q. Now, you also testified a moment ago that PETN is used in smokeless powder. Is that what you said?
A. Well, I know a reference that says that it is in smokeless powder.
Q. Would you take a look at McVeigh Exhibit J444A there in front of you.
A. Yes.
Q. Is that the reference that you were referring to -- 444A. Do you have 444A?
A. No, no. I'm afraid I don't. I apologize.
Q. Well, then, I'll give it to you.
A. Okay. I'm acquainted with this reference, sir.
MR. TRITICO: Your Honor, so that we may be clear, this is the article that was previously attached to Exhibit J444 that was removed.
THE COURT: I understand, yes.
BY MR. TRITICO:
Q. Now, do you have McVeigh Exhibit J444 there in front of you?
A. Yes, I do.
Q. This is a memo that you wrote to Special Agent Burmeister

on May 4, 1995?
A. Yes.
Q. Did you attach anything to the memorandum?
A. Yes.
Q. What?
A. Well, this was -- I've attached -- according to the text, attached two papers to this. I attached this paper, this 4 --
Q. Don't hold it up yet.

THE WITNESS: Excuse me, your Honor. I'm sorry.
I attached that paper and another paper and another document to this.
BY MR. TRITICO:
Q. Did you give this memo with the attachments to Special Agent Burmeister?
A. Yes.
MR. TRITICO: I'll offer McVeigh Exhibit J444A, your Honor.
MS. WILKINSON: No objection.
THE COURT: It's received.
BY MR. TRITICO:
Q. Now, does McVeigh Exhibit J444A discuss compounds -- component parts of smokeless powders?
A. Well, there is on the second page of it a Table 1 which is entitled "Organic Compounds that May be Found in Smokeless Gunpowder."

MR. TRITICO: Publish this?
THE COURT: Yes.
BY MR. TRITICO:
Q. This is the table you were referring to?
A. Yes, that's correct.
Q. And is PETN listed among those organic compounds that may be found in smokeless gunpowder?
A. Yes.
Q. When we say the term "smokeless gunpowder," is that the same thing that's inside of a bullet?
A. Yes, that's correct.
Q. Who compiled this list? Do you know?
A. No, I don't. I've got some references here, but I -- I don't know that.
Q. Who are the authors of this article employed -- were they employed by the Federal Bureau of Investigation? Do you know?
A. Well, Mr. Hardy was. He's Reference No. 2. And Reference No. 2 says, "D. D. Hardy, FBI lab, personal communication, 1979."
Q. Looking at the first sentence on the first page of this J444A, can you -- you can look at your copy, if you want, instead of looking at the screen. That says, "In connection with its work on mass spectrometry approach to the analysis of gunshot residues, the FBI Laboratory has compiled an array of 23 organic compounds that may occur in smokeless gunpowders."

Is that right?
A. Yes, that's correct. So the author of this was Mr. -- Mr. Hardy.
Q. And that's referencing the list on page -- the second page of J444A. Is that right?
A. Yes.

Q. Now, this article was published in the Journal of Forensic=20
Sciences; is that correct? See that at the very top?
A. Yes, I do see it.
Q. Do you consider the Journal of Forensic Sciences to be authoritative in the field of explosives trace analysis or forensic sciences in general?
A. Yes, I do.
Q. If you know, was any effort made in April or May of 1995 to

determine if the PETN that was found on Mr. McVeigh's clothing was the result of gunpowder or gunshot residue?
A. I don't know.
Q. Do you have an opinion as to whether or not it would have been appropriate for the FBI lab to make such a determination?
A. It would have.
Q. It would have been appropriate to do it?
A. Yes.
Q. Now, there is a piece of evidence that's come to be known as Q507. I want to talk to you for a minute about that. Have you seen a piece of evidence back in April and May of 1995 that

Mr. Burmeister had located some crystals on?
A. Yes, I did.
Q. Do you know that that's the piece of evidence that's now called Q507?
A. I believe that it is.
Q. You regarded the finding of the crystals as brilliant by Mr. Burmeister, did you not?
A. Yes, I did.
Q. Do you agree with the conclusions that Mr. Burmeister drew with respect to the origin of those crystals?
A. What were the conclusions, sir?
Q. That they were deposited on there as a result of a blast or an explosion.
A. I'm not sure that I can agree with that.
Q. Why?
A. I -- it may be because I don't have enough data, but I understand that piece of evidence -- the crystals were ammonium nitrate. Ammonium nitrate is very hydroscopic -- means it picks up water very quickly. I understand that the evidence -- and if I'm wrong, please correct me. The evidence lay out exposed to the environment, specifically rain, a very strong rain.
Q. Would it change your opinion if you knew that the side that Special Agent Burmeister found the crystals on was face-down outside?

A. No, sir. It's -- there is some data missing, and it may be just me that's missing it. But there is some data missing that I find it an enigma what I'm looking at: that the ammonium nitrate crystal survived in 100 percent humidity, didn't pick

nitrate crystal survived in 100 percent humidity, didn't pick up water in that hundred percent humidity situation. I don't know how that could have happened.
Q. Why is that? You said it was hydroscopic. What does that mean?
A. Well, it means it just -- it picks up water. It's some -- some materials, if you just lay them out in this room and there is any humidity at all in this room, they would absorb water; and pretty soon you'd have a little spot of water, you wouldn't have a crystal.
In the laboratory, I've analyzed ammonium nitrate for years; and one of the problems with it is it -- when we try to analyze it with the X-ray powder diffractometer, very often it picks up water while the analysis is going on and you end up with water, with a liquid solution instead of with crystal. And our lab has a very controlled humidity environment.
So I don't know how that ammonium nitrate survived, if it went through a rainstorm. I don't know how it could be on that evidence. It doesn't make sense to me.
Q. Did you have a discussion with Special Agent Dave Williams regarding paint protocols and with respect to Q507?
A. Yes, I did.

Q. In April or May of 1995?
A. No.
Q. Well, around that time?
A. No. It was in somewhere -- September of 1995.
Q. So, after April 19 is what I was trying to get at.
A. Yes, uh-huh.
Q. Did Special Agent David Williams make to you any statement or comment regarding the origin or how Q507 was found?
A. Yes.
Q. What did he say?
A. He told me that -- that the -- I need to make sure I say this right: That the piece of evidence that had the ammonium nitrate and the paint on it -- that's what we were referring to -- had been provided to us by -- to the FBI by a civilian. I'd raised an issue with identifying that piece as actually coming from the Ryder truck; and he said, "Well, it's a moot point because a civilian brought it in." And he said, "You know, we've got a problem with the chain of custody, so we're not going to use it."
Q. Do you have an opinion, Dr. Whitehurst, as to whether or not if, in fact, as alleged this bomb was an ammonium nitrate and fuel oil bomb -- do you have an opinion as to whether or not unconsumed prills of ammonium nitrate could have been discovered at the scene?
Did my question make sense?

A. Yes, it made sense, and I'd like to qualify it. My training taught me that that -- that we could find prills with

these homemade types of devices that -- you know, if they functioned improperly.

They would have to have been found in a protected area, but it's possible it could have happened.

Q. Protected area such as what?
A. Where the weather wasn't getting to it.
Q. Like pockets in the building or things like that?
A. Sure.
Q. Could they have been discovered before the rain, if they were outside?
A. If they were there.
Q. Do you know Mr. Ron Kelly?
A. Yes, I do.
Q. How do you know Mr. Kelly?
A. I've worked with him for 11 years.
Q. In April of 1995, was Mr. Ron Kelly qualified in the area of explosives analysis?
A. No, sir, he wasn't.
Q. How do you know that?
A. He didn't qualify until the fall of 1995. I went to his moot courts.
Q. In April and May of 1995, was Mr. Kelly qualified in the area of evidence analysis and collection at a scene?

A. I don't know that, sir.
Q. Do you know if prior to April and May of 1995 -- or actually with respect to this case, do you know if Mr. Kelly had ever gone to a scene to be in charge of evidence collection and analysis at the scene?
A. I'm not aware that he did, sir.
Q. Do you have an opinion as to whether or not Mr. Kelly should have been left at the scene in Oklahoma City by himself to collect evidence?
A. Yes, sir, I do have an opinion about that.
Q. What is that opinion?
A. I don't think at that time Mr. Kelly had the hands-on experience needed to understand the implications of what he was doing. I think that he could make mistakes without realizing it.
Q. In April and May of 1995, was Mr. Kelly qualified in the area of explosives trace analysis?
A. No, sir.
Q. Do you know Mr. Roger Martz?
A. Yes, I do.
Q. How long have you known him?
A. For 11 years.
Q. Do you have -- when you worked with Mr. Martz, did he -- did he do explosives residue analysis?
A. He conducted some of the subanalyses of the explosive

residue analysis protocol that we did, but he was not an explosive residue analyst.
Q. What do you mean "subanalysis"?
A. There is a flowchart of what we do. I don't know -- do you have the flowchart?
Q. Let me show you what's been introduced into evidence as Government's Exhibit 914.
A. Yes.
Q. Is that what you're referring to?
A. Yes.
Q. Is that a protocol?
A. It's a flowchart, sir. It's not a protocol.
Q. You were talking about the subanalysis that Mr. Martz was performing when you were there.
A. Yes.
Q. Was Mr. Martz qualified in April or May of 1995 in the area of explosives residue analysis?
A. No, he was not.
Q. What were -- on Exhibit 914, what were the subanalyses that Mr. Martz was performing?
A. Do you want me to point at them with a pen?
Q. If you don't mind, yes, sir.
A. I believe that he was performing -- how does this work?
Q. You need to put it on the screen. Right.
A. Okay. The solids probe, mass spec, mass spec, and the GC

mass spec, mass spec.
Q. Where is that?
A. This is not writing. It's in this block. Do you see where the arrow is?
Q. Let me see if I can help you. You're referring to the GC/MS/MS. Is that correct?
A. Yes, that's correct.
Q. And you're referring to the solid probe MS/MS?
A. Yes, that's correct.
Q. And what else?
A. And then the IMS.
Q. And then the IMS at the top of the box.
A. Yes. He was conducting analysis with IMS of drug materials at that time.
Q. Now, if you'll push that button on that pen, that arrow will go away.
A. Oh, I'm sorry. I have two arrows.
Q. Try it again.
A. Okay.
Q. There you go.
Do you have an opinion as to whether or not in April and May of 1995 Mr. Roger Martz practiced good science in the area of explosives residue analysis?
A. I don't think he did, sir.
Q. If Mr. McVeigh's clothes were checked in by Mr. Mills and

analyzed by Mr. Martz, then taken to Special Photo, then taken to Hair and Fiber and then to Mr. Steve Burmeister, do you have an opinion as to whether or not that is an appropriate method for handling explosives residue analysis?
A. I don't think it's an appropriate method, sir.
Q. Why?
A. I don't think that Mr. Martz does a reliable job on explosive residue analysis. He hadn't been trained, tested and qualified. We don't check the other areas for explosive residues. We --
Q. You. When you say "the other areas," do you mean Special Photo and Hair and Fiber?
A. Yes. They receive evidence that we've already determined there is residues on, but we don't know how they handle that. And just because we determined residues are on a material doesn't mean we've taken it all off, and they could have contaminated their areas without knowing it.

It's not their area of concern, and so it wouldn't be something they'd be aware of. So if Mr. Martz did the work and then it went to those other areas and then it went to Mr. Burmeister, it might not -- it might get to Mr. Burmeister with stuff on it that it didn't get to Mr. Martz with.
Q. In April and May of 1995, who was the most explosive -- who was the most experienced explosives residue analyst at the FBI lab?

A. I was.
Q. Were you sent to Oklahoma City to participate in the investigation of this case?
A. No, sir.

MR. TRITICO: I thank you, sir. I'll pass the witness.

THE COURT: Ms. Wilkinson?

CROSS-EXAMINATION

BY MS. WILKINSON:
Q. Good mornings, Dr. Whitehurst.
A. Good morning, ma'am.
Q. We have talked before, haven't we, about some of these concepts?
A. Yes, we have.
Q. And you have explained to me and some members of the prosecution about some of the issues involving chemical analysis of explosive residue and potential contamination; isn't that right?
A. Yes, ma'am, I have.
Q. In fact, you've given a sworn deposition in this matter, haven't you?
A. Yes, ma'am, I have.
Q. And you've made some statements in that -- in that deposition that are contrary to what you've said today, haven't you?

A. I -- I'm not sure. Can you refer to them?
Q. Do you recall talking about Mr. Kelly and his ability to -- and your opinion about his ability to collect evidence at the crime scene?
A. Yes.
Q. And at that time, did you say that you believed he was qualified to collect evidence?
A. Yes. I was very proud of what he did.
Q. So you've changed your opinion since December of 1996. Is that what you're telling this jury?
A. That's what I'm telling you, yes.
Q. And since that time, you've had some reason to change your opinion, haven't you?
A. Yes.
Q. You haven't had access to the evidence in this case, though, have you?
A. No, ma'am.
Q. You've had --
A. I -- Mr. Burmeister was working on the thing with ammonium nitrate on it, and he asked me to look at that. I mean --
Q. That was long before December of 1996, wasn't it?
A. Sure.
Q. In fact, you saw Q507 under the microscope with Mr. Burmeister, didn't you?
A. Yes, I did.

Q. And that's when you commented at that time to others that his work in finding those crystals was brilliant?
A. Yes, absolutely.
Q. And at that time you didn't raise any issue about the ability of those crystals to be on Q507 after they'd been recovered from the crime scene; isn't that right?
A. That's correct.
Q. And Mr. Burmeister told you at that time that some of those crystals were actually embedded into the plywood; isn't that right?
A. No, not at that time.
Q. You didn't observe that when you looked through the microscope?
A. No, ma'am.
Q. You didn't look at the piece of evidence very carefully?
A. No, I looked at it. I just didn't see it.
Q. So you don't know all of the conditions of the crystals that were embedded in Q507, do you?
A. No, ma'am.
Q. Let's talk about the laboratory for a moment. You've told us on many occasions, haven't you, that there is no systemic contamination in the FBI Laboratory; isn't that right?
A. In the areas that -- that I have tested, yes, that's correct.

Q. And that's pretty obvious, because you haven't found these

residues on lots of the evidence that's been tested in this case or any other case; isn't that right?
A. Yes. That is correct, ma'am.
Q. So by common sense, we know there isn't systemic contamination in the lab; right?
A. Yes.
Q. And you've told me that before yourself; right?
A. Yes, ma'am. Sure.
Q. So the only thing we're dealing is with potential, random contamination; correct?
A. Yes.
Q. And that's why you engaged in this study back in May of 1995?
A. Yes, that's correct.
Q. And when you did that, you tested the areas that you thought would be most likely to have some kind of contamination; correct?
A. I tested the units, the Explosive Unit, the Materials Analysis Unit, and Chemistry/Toxicology.
Q. Well, you didn't test the units; you tested specific areas within each unit, didn't you?
A. Yes, we did, of course.
Q. In other words, for example in the Explosive Unit, you tested specific examiners' and technicians' bench areas so you could determine exactly where there was contamination if you

found it, didn't you?
A. That's not -- that's not quite, ma'am -- quite -- we tested -- you know, if I test this bench right here and I do a swab right here, if there is contamination here, I wouldn't know exactly that there is contamination here. Do you know what I'm saying?
Q. I do.
A. Okay.
Q. Okay.
A. So we did -- we only did 50 swabs.
Q. Are you sure?
A. Well, that's what I thought.
Q. Didn't you say in deposition that there were about 75 swabs?
A. Okay.
MR. TRITICO: Your Honor, excuse me. May I have a cite to the page and line of the deposition when she uses --
THE COURT: Well, if you're going to cross-examine on the deposition, you ought to be specific with respect to the --
MS. WILKINSON: I can do that, your Honor.
THE COURT: -- page and line.
MS. WILKINSON: Would you like me to go back to the other questions I asked, like about systemic contamination?

other questions I asked, like about systemic contamination?
THE COURT: No, just from here on.
MS. WILKINSON: Okay.

Frederic Whitehurst - Cross

BY MS. WILKINSON:
Q. Dr. Whitehurst, do you recall a contamination -- the details of a contamination study that you did in May of 1995?
A. Not specifically.
Q. Would it refresh your recollection to see the notes that you typed up concerning the study?
A. Yes, it would.
Q. Does that indicate all the swabs that you took and the runs; that is, the tests that you did on those swabbings?
A. I believe it does.
Q. And let's go back to what areas you tested. You were trying to explain to us that while you did test specific areas, that couldn't tell you exactly where the contamination was from; is that correct?
A. Sure. It would give us a general idea of sort of -- was there any contamination at all.
Q. But you did look at specific areas like the benches in the Explosives Unit; correct?
A. Yes.
Q. And in fact, not only did you look at those areas, but you had photographs taken so you could determine where the swabbing had been taken; didn't you?
A. Yes. That's correct.
Q. So we can go back and look at those photographs and find exactly where there was or was not contamination; correct?

Frederic Whitehurst - Cross

A. No, ma'am.
Q. Well, didn't you direct the person who took the swabs to take them in specific areas?
A. Yes, but again, we need to be very careful here. We can't determine where there was and was not contamination. We can determine that there was or was not contamination at the spot that we rubbed, that we took a swab from. Again, if there was -- if here -- a thing that said "files near 80," whatever that was. If we went to the top of the file on the front corner but we didn't go to the back corner -- do you see -- so we have to be careful. In a contamination study, you have to be very specific, but -- you can overinfer the data and say the whole laboratory is contaminated, or underinfer it.
Q. So all the data can tell is in that specific spot where the person took the swab, if there was any contamination, it was found in that one spot. Correct?
A. Yes. And by doing sort of a broad sweep -- this was our initial -- what do you call it -- "try" at this. By doing sort of a broad sweep, you get an idea where there might be more problems that we have to look for.
Q. So even if you had swabbed 100 areas, you could not tell

Q. So even if you had swabbed 100 areas, you could not tell this jury for sure that there was no contamination in the laboratory -- correct -- because you could never swab the entire laboratory; right? It would be --
A. Yes, but it would -- the more that we did, the better idea

we'd get for the level of -- you know.
Q. So you used this study as a general guide -- guideline to determine if there was contamination in those areas; correct?
A. Yes.
Q. And you didn't just look at one place in the Explosives Unit; you looked at numerous places. Correct?
A. That is correct, yes.
Q. And you looked in Mr. Burmeister's work area, didn't you?
A. May I read? Do you know particularly where on here?
"Burmeister --"
Q. Please don't read the document out loud.
A. I'm sorry. I apologize.
Okay.
Q. And there was no contamination in Mr. Burmeister's area, was there?
A. No, there was no contamination at the spots that we checked.
Q. So when you found it back in the early 1990's and you told Mr. Tritico you weren't sure whether you had tested his area again, you had, hadn't you?
A. Yes.
Q. And there was no contamination there.
A. Yes.
Q. And when you tested the Explosives Unit, you tested numerous areas in there, didn't you?

A. Yes.
Q. And you only found one area where there was a finding consistent with PETN; correct? That was Bench No. 5?
A. Yes. That's the results.
Q. And that's not the bench where Mr. Mills works, is it?
A. I don't know that. I don't know the numbers on the benches.
Q. If I showed you the photographs, would that refresh your recollection?
A. Yes, uh-huh.
MR. TRITICO: May I?
THE COURT: Yes.
MS. WILKINSON: You have them. They're documents from the contamination study.
MR. TRITICO: Okay.
THE COURT: Do you have copies of this?
MR. TRITICO: I think so.
THE COURT: All right.
THE WITNESS: Excuse me, ma'am.

BY MS. WILKINSON:
Q. Yes.
A. Did you want me to look at this and say something?
Q. I wanted you to determine whether Bench No. 5 was Mr. Mills' bench.
A. It looks like it from here. It's kind of dark, but it

looks like it.
Q. And how can you tell that?
A. I see there is some lights over behind it, and it -- I've -- you know, I've been going over to where his area is at for a long time. You know, I could be wrong about that; but it does look like that.
Q. So if Mr. Burmeister and Mr. Mills reviewed this study and determined Bench 5 was not theirs, would you agree, or disagree?
A. If they reviewed the study and said it was not theirs, then I'd have to go and put this right up next to the bench and, you know, do a comparison.
Q. Okay.
A. I have no reason to believe that's not the bench, but it's kind of dark and -- I'm sorry.
Q. When you did this contamination study, you wrote a summary page, didn't you, about the findings of whether you found residues or not in certain areas?
A. Yes.
Q. And you noted that there was only one finding of PETN in the entire Explosives Unit -- correct -- in the unit itself?
A. Yes, that's correct. That's correct.
Q. And that you tested Burmeister's room and Ron Kelly's area and there were no hits recorded. Correct?
A. Yes, that's correct.

Q. And this was done right at about the time -- shortly after the evidence in this case that Mr. McVeigh's clothing and Q507 were tested; correct?
A. Yes. It was done in May.
Q. Would you agree, Dr. Whitehurst, that when evidence is tested and there is no residues found, that's a pretty good indication that there is no contamination as to that evidence, if you find no positive hits for explosive residue?
A. Yes.
Q. And you feel comfortable saying there is no contamination with that evidence; correct?
A. At the spot you've tested, yes. I mean, if there is nothing there, there is nothing there.
Q. So there is no evidence of contamination; correct?
A. Yes, that's correct.
Q. So in this case, if there were hundreds of tests conducted by Mr. Burmeister and very few findings of high-explosive

residue, that would make it less likely that there had been contamination; correct? Less likely?
A. Contamination of what?
Q. Of the evidence, or of the laboratory in the areas in which he was testing the evidence.
A. It would make it less likely that there was a systemic contamination.
Q. Okay. Well, if there was random contamination, you would

expect to see it more than once -- correct -- even if it's random, over hundreds of tests?
A. Not necessarily.
Q. So we're now focusing, then, on one particle of, let's say, PETN that just happens to --
A. Can I give you --
Q. -- get on a piece of evidence? Correct? Is that what we're focusing on?
A. Well, I'm not sure --
Q. We've eliminated systemic contamination. Correct?
A. Yes, that's correct.
Q. And we have all these tests that show very few positive findings, so we're not having repeated random contamination; correct?
A. I think you're misunderstanding "random contamination."
Q. Random, I take it, is a commonsense definition; correct?
A. No. There is no common sense to this at all. That's what the problem is. Can I explain?
Q. Sure. Tell us why there is no common sense at all.
A. If Mr. Mills, for instance, was to take one piece of evidence and drop it on the floor and there was contamination on that floor -- I mean, suppose he did that. Suppose when he picked his box up and put it on his lab bench and one piece of evidence touched that, that represents a potential for contamination. Just because nothing else touched it, that

doesn't weigh out the possibility for random contamination.
Q. Right.
A. If your practices are such that there is a possibility for contamination, an alternative explanation for why we found this is that somebody contaminated his table or whatever. Just because you didn't see many, many pieces without something on it doesn't mean that wasn't a contamination.
Am I clear?
Q. Yes, I believe so.
A. Okay. I'm sorry.
Q. You're telling us that there is a chance of a once-in-a-lifetime contamination -- correct -- that wouldn't repeat itself, totally random, occurs once and you never see a repeat of a contamination; correct?
MR. TRITICO: Excuse me. Even though this is cross, I'm going to object. Argumentative. Badgering the witness.

I'm going to object. Argumentative. Badgering the witness.
THE COURT: Do you understand?
THE WITNESS: Yes, I do, your Honor.
There is a chance of contamination if you haven't ruled it out.
BY MS. WILKINSON:
Q. That's not my question, Dr. Whitehurst. My question is are you now focusing on this one incident -- you're talking about the hypothetical with Mr. Mills putting the box down on the floor, picking it up, taking the piece of evidence and somehow

him putting that piece of evidence in the exact right spot, that explosive residue, transferring to that piece and then it getting to Mr. Burmeister and him finding a positive finding. You're saying that that could occur once and not occur over and over again; correct?
A. Yes, that is correct.
Q. And that would just be a once-in-a-lifetime, random contamination; correct?
A. That particular contamination.
Q. And we can never eliminate that, can we?
A. Yes, we can.
Q. We can eliminate the possibility of any contamination?
A. We can eliminate it by maintaining more proper controls.
Q. Can we eliminate it, or can we minimize it?
A. Oh, we would have to minimize it, yes.
Q. So we could never eliminate the possibility of contamination, could we, Dr. Whitehurst?
A. No, you couldn't.
THE COURT: I think we'll take the recess at this point.
You may step down now, and we'll have you back at 1:30.
Members of the jury, we'll take our usual noon recess for the usual period, during which, follow the usual cautions, keeping open minds, avoiding discussion of the case or anything about it among yourselves and with others and avoiding anything outside the evidence which could in any way influence your judgment on the issues.
You're excused till 1:30.
(Jury out at 12:01 p.m.)
THE COURT: Have the exhibits been checked that relate to the stipulations?
MR. NIGH: They have, your Honor.
THE COURT: And what's the result?
MR. NIGH: We're satisfied with them. Mr. McVeigh is satisfied with them.
THE COURT: Is that right, Mr. McVeigh?
THE DEFENDANT: Yes, sir.
THE COURT: So you're in agreement with the reading of the stipulation as to what the witness Jamie Carroll Gilley would testify to, if called?
THE DEFENDANT: I am, your Honor.
THE COURT: So when it comes time, let me know and

we'll read that stipulation.
We'll recess, 1:30.
(Recess at 12:03 p.m.)
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INDEX

DEFENDANT'S EXHIBITS

Exhibit	Offered	Received	Refused	Reserved	Withdrawn
A13	10819	10820			
A16	10825	10825			
J444A	10906	10906			
J750	10894	10894			

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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