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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Criminal Action No. 96-CR-68

UNITED STATES OF AMERICA,

Plaintiff,

vs.

TERRY LYNN NICHOLS,

Defendant.

ff

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REPORTER'S TRANSCRIPT
(Trial to Jury: Volume 100)

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ff

MATSCH,

December,

Denver,

12

Proceedings before the HONORABLE RICHARD P.

13

Judge, United States District Court for the District of

14

Colorado, commencing at 1:30 p.m., on the 1st day of

15

1997, in Courtroom C-204, United States Courthouse,

16

Colorado.

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24
Transcription
Street,
629-9285

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11588

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12 Defendant Nichols.

13 * * * * *

14 PROCEEDINGS

15 (Reconvened at 1:30 p.m.)

16 THE COURT: Please be seated.

17 (Jury in at 1:30 p.m.)

18 THE COURT: All right, Mr. Tigar.

19 MR. TIGAR: Thank you.

20 (Steven Burmeister was recalled to the stand.)

21 CROSS-EXAMINATION CONTINUED

22 BY MR. TIGAR:

23 Q. Hello, again, Mr. Burmeister.

24 What's an EGIS?

25 A. EGIS?

11589

Steven Burmeister - Cross

1 Q. Yes.

2 A. It is a instrument. It's a brand name for an
instrument

3 that is a explosives screening device, but it can also
lead to

4 chemical information for a particular sample.

5 Q. And did you run an EGIS test on Government Exhibit
664?

6 A. I believe it was conducted on that particular
sample.

chart 7 Q. Is that one of the tests that you reported in the

8 that was put up on the easel?

9 A. If I could just take a peek at the chart one
second.

10 Q. Of course.

11 A. Yes.

12 Q. Yes, it is?

13 A. Yes, it is.

14 Q. How is it listed on the chart?

15 A. It is listed as the gas chromatography with the
16 chemiluminescence detection.

17 Q. Gas chromatography. Oh.

18 Putting 1744 up on the thing here. This,
where it

19 says gas chromatography with chemiluminescence
detection; is

20 that it?

21 A. Yes.

22 Q. And who did that test?

23 A. I'm not positive who the exact operator would have
been.

24 Q. I'm going to show you page 222 of your notes and
ask if

25 that refreshes your recollection as to who did the
test.

Steven Burmeister - Cross

1 Does that refresh your recollection?

2 A. Yes.

3 Q. Who did the test?

4 A. That particular one was conducted by Special Agent
Martz.

5 Q. Didn't you tell me on cross-examination before
lunch that

6 Mr. Martz didn't do any of the work?

7 A. If I did, then I misspoke; but I thought at the
time that I

8 testified it was in regards to the ammonium nitrate
testing

9 itself.

10 Q. So the gas chromatography was for -- that was for
the

11 high-explosive tests; right?

12 A. Yes.

13 Q. Okay. And Mr. Martz is a cocky gentleman who
shoots from

14 the hip, isn't he?

15 MS. WILKINSON: Objection, your Honor.

16 THE COURT: Sustained.

17 BY MR. TIGAR:

18 Q. Do you have an opinion about Mr. Martz's abilities
in the

19 laboratory?

20 MS. WILKINSON: Objection, your Honor.

21 THE COURT: Overruled.

22 THE WITNESS: Well, you'd have to ask me on
what
23 particular types of examinations you're referring to.

24 BY MR. TIGAR:

25 Q. Well, have you ever referred to him as a cocky
gentleman?

11591

Steven Burmeister - Cross

1 MS. WILKINSON: Objection.

2 THE COURT: Yes. We'll have to limit it to
the test
3 that is involved here.

4 BY MR. TIGAR:

5 Q. Have you ever criticized his overall approach to
testing?

6 MS. WILKINSON: Objection.

7 THE COURT: Sustained.

8 BY MR. TIGAR:

9 Q. Do you have an opinion about his ability to operate
this
10 machine?

11 A. Yes.

12 Q. And what is that?

13 A. He was competent to operate that instrument.

14 Q. Showing you now what I've marked page 222 of your
notes as

Martz's work

15 Defendant's D1740. Do you recognize this as Mr.

16 in connection with that particular test?

him, and

17 A. He was provided an extract that I did provide to

18 he would have made notations on the chart following the

19 examination on the GC/Chemiluminescence instrument.

page

20 Q. And does that document which is -- is that document

21 222 of your notes? Or is that part of your notes?

22 A. It is part of my notes on this sample.

23 Q. Does the document relate to Mr. Martz's testing of

24 Government Exhibit 664?

from

25 A. It does for 664 as labeled Q507. It was an extract

11592

Steven Burmeister - Cross

1 it.

2 Q. Yes.

3 MR. TIGAR: We offer it, your Honor.

objection,

4 MS. WILKINSON: I don't think I have any

5 but I'd just like to look at it.

6 THE COURT: All right. Sure.

7 This is D1740?

8 MR. TIGAR: Yes, your Honor.

9 MS. WILKINSON: We have no objection.

10 THE COURT: All right. It's received.

11 BY MR. TIGAR:

12 Q. Now, placing what's been received now as D1740 up
on the
13 overhead television projector, we see -- the first sign
we see
14 is No. -- Run No. 4, Q507; right?

15 A. Yes.

16 Q. And he records a positive for RDX; correct?

17 A. That's what's written, yes.

18 Q. Well, does that mean he found RDX on this item?

19 A. It doesn't mean he found it, no.

20 Q. What does it mean? Does it mean it's consistent
with it?

21 Tell me what that means.

22 A. That would indicate that when he ran it, there was
a
23 positive indication for RDX in the sample.

24 Q. Uh-huh. And your conclusion you testified on
direct was
25 high explosive, not detected; correct?

11593

Steven Burmeister - Cross

1 A. That's correct. But I had reviewed his work, and I
didn't

2 agree with that particular finding.

Martz's
3 Q. So what was it that caused you to disagree with Mr.
4 finding?

charts
5 A. Well, I was the ultimate one who would review the
6 and the data on this particular run. I did not
determine that
7 it was positive for RDX.

8 Q. And did you perform an additional test or just
review the
9 read-out from the machine?

10 A. The additional testing was a mass-spectral
examination for
11 that particular material.

12 Q. Did you do that?

13 A. It was at my request.

14 Q. And did you think this was an example of Mr. Martz'
15 shooting from the hip?

16 A. No.

17 Q. This conclusion?

18 A. No.

19 Q. Why did you think he made a mistake?

20 A. I didn't say he made a mistake. I said I reviewed
the
21 chart and I didn't agree with the particular finding.

22 Q. Now, you testified that -- on direct examination
that you
23 also went and looked at a storage shed; correct?

24 A. Yes.

25 Q. That was on the 22d of April? A Saturday or
Sunday, what

11594

Steven Burmeister - Cross

1 day?

2 A. It would have been the 23d.

3 Q. 23d. Sunday?

4 A. Yes.

5 Q. And that's a storage shed that had chipboard walls
and a

6 cement floor; correct?

7 A. That would -- that sounds -- yes, that sounds
consistent

8 with what I recall.

9 Q. Are those surfaces, chipboard and cement, suitable
for the

10 retention of explosive residues?

11 A. The wooden surface could be, and the protected
environment

12 that a concrete floor would be on could definitely be a
surface

13 that could retain it.

14 Q. In -- now, finally with respect to your collection
15 techniques, what is a control sample?

16 A. A control sample would be one in which you -- if,
for

17 example, you're taking a swabbing with a piece of
gauze, you
18 would want to know whether that piece of gauze has
anything on
19 it to begin with. So in order to do that, you would
capture
20 that gauze, package it up, and send it to the
laboratory for
21 testing. If you're using a solvent in conjunction with
that
22 particular swab, you would take the solvent and the
swab and
23 send that in, and that would represent a control.
24 Q. Now, does the -- do you ever use control samples to
25 determine background levels of things to try to verify
the

11595

Steven Burmeister - Cross

1 results you're going to get in the laboratory?
2 A. Well, if you will, if you're determining background
levels,
3 the background levels would be those that would be
normally
4 present on the -- either the swab or in the solvent
that you're
5 doing.
6 Q. So that the control samples you take -- when you go
to the
7 scene, you take clean things; right? They're not

supposed --

8 they don't have any stuff on them of the kind you're
looking

9 for; correct?

10 A. Yes.

11 Q. And then to make a control sample, you take them
out and

12 expose them to the environment that you're testing in;
is that

13 the next thing you do?

14 A. Well, you're -- you in one way or another have to
expose it

15 to get it out of the packaging to put it into the
second

16 packaging.

17 Q. Yes.

18 A. But you're not really measuring the environment per
se.

19 You're actually looking at the item that's taking the
sample as

20 the control.

21 Q. Okay. And in that -- in that process, looking
around in

22 the parking lot there, were you concerned about the
background

23 levels of ammonia and nitrate ions?

24 A. Concerned is probably strong. I was aware that
there could

25 be levels of ammonium ions, could be level of nitrate
ions, and

Steven Burmeister - Cross

1 certainly that finding would weigh on my ultimate
decision if

2 in fact I found ammonium ions and nitrate ions.

3 Q. And you were aware that the bomb had damaged sewer
pipes --

4 correct -- waste pipes?

5 A. I'm not aware of that.

6 Q. Did you look at the damage to the Athenian Building
7 immediately adjacent to the parking lot, that brick
building,

8 to see if any waste pipes had burst?

9 A. I didn't check for particular waste pipes, and I
didn't see

10 any.

11 Q. Human waste contains ammonia; correct?

12 A. Yes, it does.

13 Q. I mean, do you have kids?

14 A. No.

15 Q. No? You ever looked at a diaper after it's been
hanging

16 around for a while? There's an ammonia smell; right?

17 A. That's true, yes.

18 Q. And that is ammonia; correct?

19 A. It's in combination with -- my knowledge on the
actual

detect 20 breakdown of urine and those items, I know that you can
21 ammonia in some levels, but it could also come from the
urea 22 that's present.
23 Q. Okay. Now, but as we've established before, you
didn't 24 cause any samples to be taken around the items where
these 25 items that were lying on the ground were recovered; is
that

11597

Steven Burmeister - Cross

1 correct?
2 A. I'm sorry, are you referring to soil samples?
3 Q. Yes, soil samples. Debris samples, really.
4 A. No soil samples were taken in that general area.
5 Q. And when we say soil samples, the parking lot
surface was 6 asphalt; correct?
7 A. Yes.
8 Q. But there was a lot of debris over top of the
asphalt that 9 had resulted from things falling on or being deposited
on it in 10 particular ways; correct?
11 A. There was a lot of debris on that parking lot, yes.
12 Q. And did you . . . you were aware at the time -- did

you

13 cause the people that were doing the -- you didn't
cause

14 anybody to do video-taping of the evidence recovery
procedure;

15 correct?

16 A. No, I had nothing to do with that.

17 Q. And you were aware at the time in May, 1995, were
you not,

18 that the methods of evidence collection in the field
that were

19 being used by the United States lagged behind those
used in

20 other parts of the world?

21 A. I didn't know that.

22 Q. Were you aware that in the United States the
process of

23 collection of evidence in the field by bomb technicians
had

24 been lagging for a long time?

25 A. I didn't know that.

11598

Steven Burmeister - Cross

1 Q. Do you recall being interviewed on Monday, the 22d
of

2 April, 1996, by Special Agent Joseph Lestrangle?

3 A. The name doesn't ring a bell.

4 Q. Well, I'm going to show you page 89 of what I

represent to

5 be a transcript of that interview and ask you to look
there and

6 see if that refreshes your recollection about what you
said on

7 this subject.

8 The second of the two paragraphs there.

9 A. I'd have to read the whole context --

10 Q. All right.

11 A. -- in order to see how it fit in.

12 Q. All right.

13 If you'll excuse my tabs there -- on here,
I'll give

14 you the rest of the pages, sir.

15 A. Uh-huh.

16 Q. Take your time.

17 Were you aware back in April, May, 1995, that
the

18 United States was lagging behind other places in the
world in

19 the control of evidence collection at bomb crime
scenes?

20 A. That was -- that statement there was directed at
prior to

21 that time. It was sometime before that. Essentially
when I

22 first came into the laboratory.

23 Q. You're saying that when you first came in the
laboratory,

24 you were lagging behind; but you think that by April,

May,

25 1995, United States was not lagging behind anymore; is
that

11599

Steven Burmeister - Cross

1 what you're saying?

2 A. I would have to say yes.

3 Q. So you think in April, May, 1995, you were doing it
right?

4 A. Yes.

5 Q. And were you aware, then, in April, May, 1995, of
the

6 NFPA921, National Fire Protection guide, that said
physical

7 evidence should be thoroughly documented before it is
moved?

8 You knew that; right?

9 A. I don't know whether the document itself says that,
but I

10 would concur with that topic.

11 Q. All right. Let me just show you and see. First,
does the

12 document say it; and second, do you agree with it?

13 A. Uh-huh. Yes.

14 Q. And do you know whether that standard was followed
with

15 respect to the search in the parking lot conducted on
the 21st

16 of April, 1995, by Special Agent Wilson and Mr. Kelly?
17 A. Only reviewing the after-the-fact material that
even in
18 preparation for this testimony, seeing the documents, I
believe
19 what's mentioned in that article was in fact performed.
20 Q. It's your opinion that it was; is that right?
21 A. Yes.
22 Q. Now, next-to-last time. With respect to crystals,
sir, at
23 the time you were doing the examination of Government's
664,
24 were you aware that ammonium nitrate crystals can occur
in
25 different shapes?

11600

Steven Burmeister - Cross

1 A. Yes.
2 Q. And those shapes can be influenced by the way in
which the
3 ammonium nitrate is deposited; is that -- was that your
4 understanding?
5 A. Deposited and formed on a particular surface.
6 Q. Now, during the -- you did all the examinations
that you
7 testified about on direct examination -- correct, sir
--
8 including the ones -- or caused to be done or did --

the ones

9 that included the ones to try and detect high
explosives;

10 correct?

11 A. Yes.

12 Q. And you also looked at all the fragments you talked
about;

13 is that correct, sir?

14 A. Yes.

15 Q. And you expressed your opinions to many, many
people;

16 correct?

17 A. I don't know what you mean by that.

18 Q. Well, you expressed your opinions to your principal
19 examiner; correct?

20 A. He would have received my findings in a written
form.

21 Q. And then he made a report based on those; correct?

22 A. A final, official laboratory report was issued.

23 Q. Yes. And did you read that?

24 A. I only recall seeing portions of that report. I
don't

25 recall reading the entire report.

11601

Steven Burmeister – Cross

1 MR. TIGAR: Just a moment, sir.

2 I got it.

3 BY MR. TIGAR:

4 Q. Now, did you -- did you see the report after --
have you

5 previously testified that you saw the report after it
was

6 prepared?

7 A. I would have seen it after it was prepared and in
its final

8 form.

9 Q. Yeah. So you saw the whole thing; right?

10 A. Again, portions of it, I recall seeing. The entire
report,

11 I'm not sure if I saw the entire report.

12 Q. Were you interviewed again Monday, the 22d of
April, 1996,

13 by Special Agent Joseph Lestrangle and others?

14 A. I'm not sure of the name. The name doesn't sound
familiar.

15 Q. Do you remember on -- do you remember being
interviewed on

16 or -- in or about April, 1996?

17 A. By whom?

18 Q. By a group of people that included Special Agent
Lestrangle.

19 A. Again, I'm not sure of the --

20 Q. How about Mr. Eldon -- was he there?

21 A. That name I recognize, yes.

22 Q. Do you recall being asked this question and making
this

23 answer? Page 73.

Williams 24 "Now, did you review this report, the Dave
question 25 report, before it went out? Let me just ask you that

11602

Steven Burmeister - Cross

1 first. Did you review it all?"

not sure 2 Agent Burmeister: "I saw it afterwards. I'm
3 if I saw it before."

making 4 Do you remember being asked that question and
5 that answer?

consistent 6 A. If you're reading it to me now, that would sound
7 with what I recall saying.

8 Q. And does it sound consistent with what you remember
9 happening?

the report 10 A. Again, my recollection is that I would have seen

reading the 11 but only read parts of the report. I don't recall

12 entire report at all.

whether you 13 Q. Sir, do you have any doubt that you were asked

afterwards? 14 reviewed it all and that you said you saw it

15 A. Well, you're asking me what my recollection is. My
16 recollection today is that I don't recall seeing the --
reading
17 the entire report. I only recall seeing it but reading
18 portions of it.

19 Q. And your recollection today is that you told Mr.
Eldon that
20 you'd seen it all; correct?

21 A. That sounds consistent with it, yes.

22 Q. Now, in addition -- you discussed your findings
with
23 respect to high explosives, ammonium nitrate,
examination of

24 plastic with your principal examiner, we established.
And you
25 also made lab reports on the work that you've done;
correct?

11603

Steven Burmeister - Cross

1 A. I recall providing the principal examiner with my
written
2 results.

3 Q. And you also discussed your findings with other
people in
4 the Department of Justice; correct?

5 A. On various questions. You'd have to give me the
particular
6 topics. I mean it's pretty broad --

chemical 7 Q. You discussed what you -- you discussed the
8 composition of the device, didn't you?
me. I 9 A. See, I don't have the actual interview in front of
10 may very well have. I don't know.
there's a 11 Q. Well, isn't it a fact, sir, that in your view,
12 mystery behind not knowing what the device really
contained and 13 how it was configured?
14 MS. WILKINSON: Objection, your Honor. Again
this is 15 beyond the scope.
16 THE COURT: Sustained.
17 BY MR. TIGAR:
doing all 18 Q. Sir, you were the person who was responsible for
19 of your -- you were responsible for overseeing all of
the 20 chemical tests; correct?
21 A. Yes.
the 22 Q. And the chemical tests were designed to detect what
23 device might have contained; correct?
24 MS. WILKINSON: Objection, your Honor.
25 THE COURT: Overruled.

11604

Steven Burmeister - Cross

1 THE WITNESS: The purpose of the chemical
testing was
2 to determine what explosives and explosive residues may
have
3 been on the material itself. They can only provide
suggestions
4 as to what the device may have contained.

5 BY MR. TIGAR:

6 Q. And you understood that was your purpose? You
wanted to
7 provide suggestions as to what the device may have been
8 contained; correct?

9 A. That's part of the overall findings.

10 Q. That was your job; correct?

11 A. To conduct the chemical examination of the
material.

12 Q. The -- all the examinations that you testified to
having
13 suggestions as
14 to what the device might have contained; is that right?

15 A. It's information that can be used to determine what
that
16 device may have contained.

17 Q. And you, as the acting chief of the Explosives Unit
of the
18 FBI Laboratory, have expertise in the construction and
content

19 of explosive devices; correct?

20 A. That's not my expertise.

21 Q. You know how to build them, don't you?

22 A. But I'm not an expert in those particular devices.

23 Q. Have you built explosive devices, improvised
explosive

24 devices?

25 A. Yes, I have.

11605

Steven Burmeister - Cross

1 Q. You've blown up trucks with them, haven't you, sir?

2 A. I've been involved with testing where vehicles have
been

3 exploded.

4 Q. So you know -- you know how to make them; correct?

5 A. I'm aware of construction, but I don't consider
myself an

6 expert in that area.

7 Q. And you've also read books on how to make them;
correct?

8 A. Yes.

9 Q. Well, in your work, was -- in the context of
attempting to

10 help people figure out what this was made of -- correct
-- or

11 not?

12 MS. WILKINSON: Objection, asked and answered.

13 THE COURT: Overruled.

14 THE WITNESS: Could you repeat the question?

15 BY MR. TIGAR:

16 Q. Yes. Your work was to help figure out what this
was made

17 of; correct?

18 A. Chemical analysis is used to determine what that
device may

19 have contained.

20 Q. All right. And in your opinion, there's a mystery
as to

21 what it contained, to this day, isn't there?

22 MS. WILKINSON: Objection.

23 THE COURT: Sustained.

24 MR. TIGAR: May I inquire? I don't want to
trespass

25 on the Court's ruling. Is this a scope matter, your
Honor?

11606

Steven Burmeister - Cross

1 THE COURT: It is.

2 MR. TIGAR: Very well.

3 Agent Burmeister, then I have no further
questions.

4 We would like to have the agent recalled, and I'll ask
him,

5 then, when he comes back.

6 THE COURT: All right.

7 Miss Wilkinson, do you have any redirect?

8 MS. WILKINSON: I do, your Honor. Thank you.

9 REDIRECT EXAMINATION

10 BY MS. WILKINSON:

11 Q. Agent Burmeister, when you received Government's
Exhibit 664, did you keep track of the chain of custody in your
12 laboratory?
13

14 A. Yes.

15 Q. How do you do that?

16 A. There's a chain-of-custody form that is kept in my
notes
17 with that particular item.

18 Q. Are you familiar with something called a laboratory
work
19 sheet?

20 A. Yes.

21 Q. What is that?

22 A. The laboratory work sheet is a document that is
prepared by
23 the primary examiner which lists various information
about the
24 case as well as informations about specific samples
that are
25 submitted for examination.

Steven Burmeister – Redirect

receiving 1 Q. Does it include a description of the items you're
2 for testing?

3 A. A very brief description.

certain 4 Q. And do you annotate that to show when you received
5 items?

6 A. Yes.

show when 7 Q. And did you annotate a laboratory work sheet to
8 you received Q507 as well as other items?

9 A. Yes.

the 10 Q. And did you provide those as parts of your notes to
11 Government and to the defense?

12 A. Yes, I did.

13 MS. WILKINSON: Your Honor, we'd offer 2122.

14 MR. TIGAR: No objection, your Honor.

15 THE COURT: 2122 is received.

16 MS. WILKINSON: Thank you.

17 May I display this, your Honor?

document. 18 THE COURT: Yes. It's a multiple-page

and I'll 19 MS. WILKINSON: Yes. I'll start with page 1,

20 say for the record what pages we're looking at.

21 THE COURT: All right.

22 BY MS. WILKINSON:

23 Q. Agent Burmeister, is this the first page of your
work sheet

24 for Q507?

25 A. Yes.

11608

Steven Burmeister – Redirect

1 Q. Whose handwriting is that?

2 A. That's mine.

3 Q. What does that indicate?

4 A. This indicates that specimens Q482 through Q553
were

5 received on 4-28-95, with my initials from Mr. Mills.

6 Q. That would include Q507?

7 A. Yes.

8 Q. And I'm going to turn to page 5 of this document.
Do you

9 see Q507 there as the second entry?

10 A. Yes.

11 Q. And before we go to that, let me stop at the top.
The

12 first entry says Q482 through 553.

13 A. Yes, it would.

14 Q. Does that show on what date you received it?

15 A. Yes.

16 Q. What date?
17 A. 4-28, 1995.
18 Q. And on the next line, does it show where Q507 went
after
19 you had it?
20 A. Yes.
21 Q. Who does it show it went to?
22 A. That would have been Special Agent Buechele.
23 Q. And on what date did you send it to him?
24 A. It was sent to Agent Buechele on June 5, 1995.
25 Q. Now, let me show you 664.

11609

Steven Burmeister - Redirect

1 Do you see your initials on the back of
Government's
2 Exhibit 664, Q507?
3 A. Yes.
4 Q. Do you see anyone else's initials on there?
5 A. Yes, I do.
6 Q. What other initials are on there?
7 A. It was Mr. -- Agent Buechele's initials.
8 Q. Now, let's look at the front here. Do you see this
9 marking -- the marking on the red and the marking on
the
10 yellow?

11 A. Yes, I do.

12 Q. Is there indication of the Q number on the yellow?

13 A. Yes.

14 Q. What does it say?

15 A. It's listed as Q507.

16 Q. Are there initials below that?

17 A. Yes.

18 Q. What does it say?

19 A. It's RCB, which is Agent Buechele's initials.

20 Q. How about on the red portion? Is there another Q
marking?

21 A. Yes.

22 Q. That looks like in gold or some kind of light pen?

23 A. Yes.

24 Q. What's the marking there?

25 A. The Q is Q 507.

11610

Steven Burmeister - Redirect

1 Q. And are there initials under that?

2 A. Yes.

3 Q. What is that?

4 A. It is RCB, which is Agent Buechele's initials.

5 Q. Starting with the front that you just described,
let's see

were 6 if we can show the jury. Are these the initials you

7 describing on the yellow portion?

8 A. Yes.

9 Q. And that says "Q507 RCB"?

10 A. Yes.

lighter 11 Q. And let me see if I can -- they're there in this

12 writing. Does it say the same thing?

13 A. Yes, it does.

14 Q. Q507 and RCB?

15 A. Yes.

I can 16 Q. And on the back here -- first of all, let's see if

Are 17 turn it so you can read it. Am I going the wrong way?

18 those your initials written sideways?

19 A. Yes, on the left side.

20 Q. And what are your initials?

21 A. SGB.

22 Q. And can you read these larger markings, here?

23 A. It's Q507.

24 Q. And the initials?

25 A. RCB.

1 Q. Now, when you were asked on cross-examination about
the

2 ammonium nitrate crystals that you found on
Government's 664, I

3 believe counsel referred to it as trace evidence.
Would you

4 consider the ammonium nitrate crystals you found on the
back of

5 664 trace evidence?

6 A. No.

7 Q. Why not?

8 A. Trace evidence is typically those pieces or those
chemicals

9 that are invisible to the naked eye and even some with
the

10 aided eye. It's typically used on solvent-type
extractions

11 where things are invisible.

12 Q. And you said that when you looked at this -- could
you

13 actually see the crystals without the aid of a
microscope?

14 A. I could take that object and look at the surface;
and after

15 the finding, yes, I could find it.

16 Q. All right. And when you used your microscope to
find the

17 crystals, does that still mean that it's not trace
evidence?

18 I'm not sure I understand why, even though you looked
through a

19 microscope, it's not trace evidence.
20 A. Well, once -- using the microscope, I can look
closer to
21 the surface. These are particles. And really anytime
I can
22 actually see a particle and physically remove it with a
pair of
23 forceps, I don't consider that trace. That's almost a
bulk
24 examination because I have material itself.
25 Q. In your business, in the explosive residue analysis

11612

Steven Burmeister - Redirect

1 business, would those crystals be considered big
evidence?
2 A. Yes.
3 Q. Now, when you identified those crystals as ammonium
4 nitrate, did you identify them as ammonium ions and
nitrate
5 ions?
6 A. No.
7 Q. Is there a difference between making a finding of
8 identifying ammonium nitrate crystals and just
identifying
9 ammonium ions and nitrate ions?
10 A. Yes, that's different.
11 Q. Explain to the jury how that's different.

12 A. When you're detecting the ions themselves, you're
now
13 detecting the trace amounts of these particular
materials. The
14 source of those ions are not attributed directly to
ammonium
15 nitrate, and they are found deposited on the surface
from other
16 forms. The ammonia could be connected to something
else. The
17 nitrate could be connected to something else. Ammonium
nitrate
18 is in its form, in its solid form.
19 Q. Is it more or less significant when you find
ammonium
20 nitrate crystals vs. ammonium ions and nitrate ions?
21 A. Much more significant.
22 Q. Why is that?
23 A. Because now we actually have the material itself of
24 ammonium nitrate.
25 Q. You told us, I think on your chart, Government's
Exhibit

11613

Steven Burmeister - Redirect

1 1744, that you did some tests that showed ammonium
nitrate --
2 is that correct -- up here on the top?
3 A. Yes.

4 Q. But you also looked at ions?

5 A. Yes.

6 Q. Does that mean you only found ions during these
tests?

7 A. I would have been looking for a panel of different
types of

8 ions, and that was the purpose of that test, to see
what ions

9 were present, what other materials were present.

10 Q. And how do these findings, when you used the ion
11 chromatography and the other tests of ions, support
your

12 findings up here -- using the polarized light
microscope and

13 the FTIR that you found ammonium nitrate?

14 A. Well, now that I'm taking the material, I'm
applying it to

15 water, the water will break it down into its
components, and

16 they would be cross-checked mechanisms for me to verify
17 ammonium nitrate in itself. I should find ammonium
ions. I

18 should find nitrate ions.

19 Q. Now, during cross-examination, you were asked about
a test

20 that you conducted in another test, using a solid probe
mass

21 spectrometer; is that right?

22 A. Yes.

23 Q. And did you use the solid probe mass spectrometer
in making

24 any of these determinations as to ammonium nitrate?

25 A. No.

11614

Steven Burmeister – Redirect

these
with
1 Q. And do you have any reason to believe that any of
2 tests that you relied on would confuse ammonium nitrate
3 urea nitrate?

4 A. No.

high
5 Q. You told us that there were some tests conducted on
6 Government's Exhibit 664 to determine if there were
7 explosives; is that right?

8 A. Yes.

is that
9 Q. And you sent a sample taken from this to Mr. Martz;
10 true?

provided it
11 A. Yes. I took an extract from that material and
12 to him.

did one
13 Q. Okay. And you told Mr. Tigar, I believe, that he
14 test, a screening test, using the EGIS, or EGIS?

15 A. Under my direction, yes.

determine if
16 Q. Did you cause other tests to be conducted to

17 there were in fact high-explosives residue on
Government's

18 Exhibit 664?

19 A. Yes. Yes, I did.

20 Q. And is that your policy in the lab, to conduct more
than

21 one test to determine if there is in fact high
explosives?

22 A. Yes.

23 Q. And what did that second test tell you?

24 A. That it was negative.

25 Q. And have you -- is that common practice in the
laboratory

11615

Steven Burmeister - Redirect

1 where one test might tell you one thing and one test --

2 MR. TIGAR: Objection: Leading, your Honor.

3 THE COURT: Sustained.

4 BY MS. WILKINSON:

5 Q. How do you explain the different results from one
test to

6 the other, as to high explosives on Government's
Exhibit 664?

7 A. It's useful to conduct cross-check mechanisms to
check the

8 opposites of instrumentation to verify any findings
that one

9 may have and cross-check it with another one. If you
don't
10 have both in agreement, then you can't make any
determination
11 as to a finding.

12 Q. Now, as with regard to ammonium nitrate, how many
different
13 cross-checks did you do on Government's Exhibit 664?

14 A. Several different cross-checks were actually made
above and
15 beyond what normally would have been an identification.

16 Q. Now, you were asked on cross-examination whether
you
17 conducted test for hydrocarbons on Government's Exhibit
664,
18 and you said you did not?

19 A. Yes.

20 Q. Why didn't you test for hydrocarbons?

21 A. Early on I made a determination that items that
were
22 removed from that scene itself would not be tested for
23 hydrocarbons, and that was based on the vehicles that
were in
24 the parking lot. Many of those vehicles had fuel tanks
that
25 had ruptured. There were trucks that were in the
proximity of

11616

1 that particular scene. There was exhaust being
displayed by
2 the vehicles themselves. And I felt based on that
finding it
3 would be of no value to determine whether -- if a
finding of
4 hydrocarbons was on a sample, what the significance of
that
5 finding would be.

6 Q. So if you had found hydrocarbons on 664, would you
have
7 been able to say anything about its significance?

8 A. No.

9 Q. And does that relate in some way to background
levels that
10 are at the scene?

11 A. Yes.

12 Q. Now, you were asked during cross-examination about
why you
13 didn't take soil samples from the parking lot and other
14 background samples. Do you recall that?

15 A. Yes.

16 Q. Why didn't you -- or why were you unable to take
background
17 samples of the bombing crime scene?

18 A. Well, there was a urgency to get the task done at
hand.

19 There were various samples that -- in my particular
case, I

20 wanted to capture as many different samples as possible

in that

21 particular scene. And so taking samples that were
viable

22 samples that seemed to me to be a good surface, those
ones were

23 taken.

24 Q. To take ideal background or control samples, would
you have

25 had to have had samples from before the time of the
explosion?

11617

Steven Burmeister - Redirect

1 A. Absolutely.

2 Q. Was that possible?

3 A. No. I don't have that luxury.

4 Q. And if you had found nitrates in the soils
surrounding the

5 area where Government's Exhibit 664 was recovered,
would that

6 have changed your findings that you identified ammonium
nitrate

7 crystals on this exhibit?

8 A. No.

9 Q. Why not?

10 A. If you want to try to attach that the ions that
came from

11 the soil were somehow part of the ammonium nitrate
that's in

12 that particular sample, I -- it's my opinion that the
nitrates
13 that are there would not have produced the types of
crystals
14 that were formed and found on that particular sample
itself.

15 Q. Now, during the -- your laboratory work on this
case, do
16 you recall approximately how many different items in
the
17 bombing crime scene you examined for explosives
residue?

18 A. There were over 400 items that were examined by me
for that
19 particular test.

20 Q. Did you find ammonium nitrate on any other exhibit
or piece
21 of evidence from the bombing crime scene?

22 A. No.

23 Q. If the ammonium nitrate crystals had reformed under
the
24 hypothesis that Mr. Tigar gave you, would you have
expected to

25 see ammonium crystals -- ammonium nitrate crystals on
other

11618

Steven Burmeister - Redirect

1 items from the parking lot and other areas surrounding
the
2 bombing crime scene?

3 A. I would expect that, yes.

Honor. 4 MS. WILKINSON: No further questions, your

5 THE COURT: Mr. Tigar.

6 RECROSS-EXAMINATION

7 BY MR. TIGAR:

8 Q. Why would you expect that?

9 A. If it was formed from nitrates and ammonium ions
that were

10 floating around in the air or from the ground surface,
they

11 would have been deposited on other items; and through
my

12 microscopic examinations on other specimens, I would
have

13 detected it.

14 Q. Now, you answered a lot of questions about ammonium
ions

15 and nitrate ions at the scene; correct?

16 A. I answered questions about those ions, yes.

17 Q. Yes. Now, when you went to Mr. Nichols' house, you
had

18 some little glass bottles with screw tops; right?

19 A. Yes.

20 Q. And then you could pick up things and put them in
little

21 glass bottles and label them; right?

22 A. Yes.

23 Q. Didn't take very long, did it?

24 A. Essentially, no.

25 Q. Now, when you were in the parking lot, did you have
little

11619

Steven Burmeister - Recross

1 glass bottles with screw tops?

2 A. Yes.

3 Q. Could you have looked at the sample of the soil
underneath

4 the items you were picking up and put a few -- some of
that

5 soil into a little glass bottle with a screw top?

6 A. If I were there at the time that it was actually
collected,

7 I suppose I could have done that.

8 Q. Did you direct anybody to do it?

9 A. No.

10 Q. Now, if the dirt that was on the parking lot --
we've seen

11 pictures of the parking lot -- If the dirt and the
debris that

12 was on the parking lot came from a place that had a
little bit

13 of ammonium nitrate on it, you have no way of knowing
that, do

14 you?

15 A. I have no idea.

16 Q. And because am -- ammonium nitrate is a very common
--

17 commonly used in a number of applications, such as
fertilizer;

18 correct?

19 A. It's used as a fertilizer.

20 Q. Now, you also said on redirect examination that --
oh, you

21 said that you had an urgency about collecting evidence;
is that

22 right?

23 A. Yes.

24 Q. How many days were you there?

25 A. When I say "urgency," I wanted to capture the scene
as soon

11620

Steven Burmeister - Recross

1 as possible. So I arrived on the 20th; and based on
that, I

2 wanted to capture as many samples as possible.

3 Q. Now, you said that the -- you regarded the ammonium
nitrate

4 you found on 664 as big evidence. You answered that
question.

5 You said it was big; right?

6 A. Yes, I did, I said that.

7 Q. Is it big?

8 A. For me, it's big.

9 Q. Okay. It's significant; right?

10 A. Not in terms of significance. I'm talking about in
the

11 size.

12 Q. Okay. Well, you also said it was significant;
correct?

13 A. It would be significant finding, yes.

14 Q. Why is it a significant finding, to you?

15 A. In the times that I've been working, this is the
second

16 time that I've actually seen crystals on a particular
material

17 itself.

18 Q. Now, prior to April 21, 19 -- April 28, 1995, had
you ever

19 seen crystals?

20 A. I have seen it only in one other incident.

21 Q. Okay. And what incident was that?

22 A. It was an incident -- I forget the exact location.
It was

23 from a foreign country. And it was a sample of Tovex
that had

24 been deposited on a particular object and had not
exploded to

25 completion but was deposited on a material.

11621

sausage 1 Q. So you mean if somebody uses Tovex, that's that

2 stuff?

3 A. Yes.

residues that 4 Q. And you mean that Tovex can go off and leave

5 you can find?

6 A. Yes.

7 Q. Did you find any here?

8 A. Of Tovex?

9 Q. Yes.

in Tovex. 10 A. I didn't find the other components that are found

other 11 Q. You didn't find the same thing you'd found in that

12 case; right?

13 A. That's correct.

you 14 Q. Okay. Now, you say that it was significant because

could go 15 never found it before. Does -- is there some book we

scientific 16 to and read how significant this is? Is there some

17 test we could do to see if this was significant or not?

18 A. I don't know what you're asking there.

says if 19 Q. Is there a book we could go to in the library that

that has 20 I find ammonium nitrate crystals at a bombing scene,

21 some significance?

22 A. I'm not sure if it's actually addressed that way in
texts.

23 Q. Is there a paper that has been delivered by
somebody at a

24 scientific gathering, a peer-reviewed paper, that says
that

25 this finding of crystals is significant in context of
bombing

11622

Steven Burmeister – Recross

1 crime scene?

2 A. There have been papers that have been written.
There was a

3 document that was prepared by a individual in Canada, a
Sandy

4 Beverage, who talked about various techniques for
residue

5 analysis. I recall him addressing various findings.
And right

6 now, I'm not sure whether he actually addresses the
finding of

7 crystals. It's my recollection that he does, but I'm
not

8 positive.

9 Q. So as you sit there today, you can't remember
whether

10 there's any such document that addresses crystals; is
that

11 right?

that 12 A. There are documents -- I'm not sure about findings
would be 13 directly address the significance of crystals that you
14 finding.

is 15 Q. Well, is it your testimony, sir, that this finding
the 16 significant because it would help you figure out what
17 device was?

18 A. As part of the residue analysis, yes.

that you 19 Q. Well, if that's the reason, then, isn't it a fact
20 don't know what the device was made of?

21 MS. WILKINSON: Objection.

22 THE COURT: Sustained.

any more 23 MR. TIGAR: Okay. Well, Agent, I don't have
24 questions.

25 We will -- we'll ask him back, your Honor.

11623

Steven Burmeister - Recross

1 THE COURT: Okay.

2 MS. WILKINSON: That's fine.

3 THE COURT: You may step down now, and --

I'm 4 MR. TIGAR: Excuse me, your Honor, one more.

5 sorry.

6 THE COURT: All right.

7 BY MR. TIGAR:

8 Q. Is there anything on that log, Government Exhibit
2122,

9 that shows where the thing, Government's 664, was when
the

10 crystals disappeared?

11 A. I'm not sure. Which log are you referring to?

12 Q. Exhibit 2122, the log that was shown to you most
recently

13 on redirect examination. My question just is: Is
there

14 anything there that shows where it was when the
crystals

15 disappeared?

16 A. The log itself does not go that far. It was
sometime after

17 the generation of this log that the item was actually
examined.

18 I believe it was sometime in November of '96 that it
was first

19 discovered by myself that the crystals were not on 507.

20 Q. But that log does go through the time that Agent
Buechele

21 had it and then gave it back to you; correct?

22 A. Well, the chain of custody that I'm referring to is
a --

23 what I've seen earlier today, that's the chain of
custody that

24 I'm talking about.

Buechele 25 Q. I'm talking about that that log shows that Agent

11624

Steven Burmeister - Recross

1 got it in June and gave it back in July; right?

2 A. This is up to '95; I'm talking '96.

Buechele 3 Q. Yes, I understand. Does that log show that Agent

4 got it in June and gave it back in July?

5 A. Yes, June of '95, given back in July of '95.

6 MR. TIGAR: Thank you. No further questions.

7 MS. WILKINSON: Just one, your Honor.

8 REDIRECT EXAMINATION

9 BY MS. WILKINSON:

crystals 10 Q. Agent Burmeister, you don't know when those

11 disappeared or dissolved off Q507, do you?

12 A. No.

Buechele's 13 Q. You don't know if that happened during Agent

14 examination?

15 A. That's correct.

16 MS. WILKINSON: No further questions.

and 17 THE COURT: All right. You may step down now,

18 counsel will be in touch with you.

19 Next, please.
20 MR. MACKEY: Your Honor, we'll call Linda
Jones.
21 THE COURTROOM DEPUTY: Would you raise your
right
22 hand, please.
23 (Linda Jones affirmed.)
24 THE COURTROOM DEPUTY: Would you have a seat,
please.
25 Would you state your name for the record and
spell

11625

1 your last name.
2 THE WITNESS: Linda Edwina Jones, J-0-N-E-S.
3 THE COURTROOM DEPUTY: Thank you.
4 DIRECT EXAMINATION
5 BY MS. WILKINSON:
6 Q. Afternoon, Miss Jones. You've been sitting with us
in the
7 courtroom today, haven't you?
8 A. Yes, I have.
9 Q. And for the past several days?
10 A. Yes.
11 Q. Were you asked by the United States to do an
independent

12 analysis of the bombing crime scene in Oklahoma City?

13 A. Yes, I was.

14 Q. And are you here today to tell us about that?

15 A. Yes.

16 Q. Could you give us a little background and tell us
where
17 you're from?

18 A. I'm from the forensic explosives laboratory of the
Defense

19 Evaluation and Research Agency of the Ministry of
Defense in

20 England.

21 Q. And were you born in England?

22 A. Yes, I was.

23 Q. And how long have you been working -- can we call
it DERA?

24 A. Yes, I think that's a good idea.

25 Q. Okay. And how long have you been working for DERA?

11626

Linda Jones - Direct

1 A. It's been called different things over the last few
years,

2 but I've worked for the Ministry of Defense for 24
years and

3 concentrated on forensic work for the last 12 years.

4 Q. Can you tell us generally what DERA does in
England.

forensic 5 A. The forensic explosives lab of DERA conducts
involving 6 explosives investigations; for incident, suspected of
on behalf 7 the criminal misuse of explosives, and this is mainly
8 of the British police and other agencies.

9 Q. And is there a laboratory located at DERA?

10 A. Yes.

in that 11 Q. And what kind of forensic work have you conducted
12 laboratory?

that 13 A. I've conducted examinations of explosive devices
explosive 14 haven't gone off but have been made safe, post-
recovered 15 scenes, residue analysis, and finds and caches of
connotation. 16 materials suspected of having an explosives

17 Q. Have you also traveled to bombing crime scenes?

18 A. Yes, I have.

in this 19 Q. Now, when you did your work for the United States
20 case, what was your title at DERA?

21 A. I was the principal forensic investigator.

22 Q. What is your current title?

23 A. I'm a DERA fellow.

24 Q. How long have you been a DERA fellow?

25 A. Approximately six hours.

11627

Linda Jones – Direct

1 Q. Why is that?

2 A. I changed my title as of the 1st of December.

3 Q. And what is a DERA fellow?

4 A. It's the most senior professional title that DERA
confers.

5 Q. Well, since you did your work in this case when you
were a

6 principal forensic investigator, can you tell us
generally what

7 a principal forensic investigator does?

8 A. I carried out some of the most important
investigations in

9 England involving some of the most serious explosives
crime.

10 Q. And in that capacity, have you reviewed or become
familiar

11 with ammonium-nitrate-based explosives?

12 A. Yes, I have.

13 Q. Have you become familiar with ammonium-nitrate-
based

14 improvised explosive devices?

15 A. Yes.

16 Q. Can you tell the jury what a improvised explosive
device

17 is.

18 A. An improvised explosive device can take really two
forms.

19 Either the explosive itself can be homemade and the
other parts

20 of the bomb can be constructed from off-the-shelf
materials, or

21 the explosive device can include a manufactured
explosive but

22 the other bits that go in to make the explosive a
viable bomb

23 are homemade.

24 Q. During your tenure with DERA as a principal
forensic

25 examiner, what type of bombing crime scenes have you
visited in

11628

Linda Jones - Direct

1 England?

2 A. Bombing scenes that have ranged from the use of a
few

3 pounds of explosive, both manufactured and improvised,
right up

4 to thousands of pounds of improvised explosives.

5 Q. Have you ever seen a truck bomb before?

6 A. Yes.

7 Q. Have you ever seen one that was rendered safe?

8 A. Yes.

9 Q. Have you examined that?

10 A. Yes.

11 Q. And have you ever seen a truck -- crime scene where
a truck

12 bomb had actually exploded?

13 A. Yes, on a number of occasions.

14 Q. Now, before we get into your specific findings in
this

15 case, can you tell us a little bit about your
educational

16 background and start with what you did after high
school.

17 A. After high school, I left school at age 16 and
initially

18 went to work for a pharmaceutical chemist. And then I
stopped

19 my education for a period at that time.

20 Q. And what did you do next?

21 A. Next I joined the Ministry of Defense in England in
an

22 explosives manufacturing plant.

23 Q. What did you do at that plant?

24 A. It was mainly the chemical analysis and testing of
25 explosives manufactured by that explosives factory.

11629

Linda Jones - Direct

1 Q. Were those military explosives?
2 A. Yes.

3 Q. And what was your purpose for examining those
manufactured

4 explosives?

5 A. It was quality-assurance testing. The factory
would make

6 the explosives, and we would check to make sure they'd
made

7 what they thought they'd made.

8 Q. What type of explosives did you test?

9 A. They were all high-performance explosives: RDX,
TNT, HMX,

10 HNS, and some intermediate products and ingredients.

11 Q. How long did you do that for?

12 A. From 1973 to 1978. So about five years.

13 Q. After that, did you move to DERA headquarters?

14 A. It wasn't called that at the time, but I moved to
15 headquarters in London, yes.

16 Q. What was your assignment there?

17 A. I carried out studies and chemical analyses of the
18 interaction of explosives with various polymers and
plastics

19 and paints and adhesives. That was the main part of my
work.

20 Q. Now, when you say the interaction of plastics and
21 explosives, what do you mean?

22 A. What we were concerned about was to make sure that
some of

23 the plastics and other polymers that were being used,
for

going to 24 example, to put explosives in, the containers, weren't
make sure 25 react adversely with the explosives. So we wanted to

11630

Linda Jones - Direct

1 there weren't any extra dangerous by-products produced.

this work, 2 Q. While you were at the Ministry of Defense doing

3 did you continue your education?

sponsored 4 A. Yes. When I joined the Ministry of Defense, they

5 me to study for my degree, which was in chemistry.

6 Q. Did you complete that?

7 A. Yes, I did.

you 8 Q. And at some point after completing your degree, did

9 become a member of the Royal Society of Chemistry?

10 A. Yes, in 1983.

11 Q. What is that?

body whose 12 A. The Royal Society of Chemistry is a professional

science of 13 headquarters are in England. And it furthers the

14 chemistry and represents chemists.

Britain? 15 Q. Does it qualify and accredit chemists in Great

16 A. Yes, it does.

you 17 Q. And does that mean when you joined the Society that

18 were qualified or accredited as a chemist?

graduate. 19 A. Yes. When I first joined, I was admitted as a

full 20 And then in 1983, I was made a chartered chemist and a

21 member.

22 Q. And have you gone through the ranks, so to speak?

23 A. Yes, I have.

24 Q. And what is your status now?

Chemistry. 25 A. I am now a fellow of the Royal Society of

11631

Linda Jones - Direct

1 Q. Is that the highest level?

2 A. Yes.

3 Q. Now, you just told us that while you were
completing your

4 education, you were working on plastics and explosives
for the

5 Ministry of Defense?

6 A. Yes.

7 Q. What did you do after that?

8 A. In 1985, I transferred to the forensic explosives

9 laboratory, where I am now.

10 Q. Did you have a training period?

11 A. Yes.

12 Q. How long was your training period there?

13 A. Two to three years before they considered me

14 appropriately -- sorry -- appropriately experienced to
give
15 testimony in court.

16 Q. And approximately how many explosives or explosive-

related

17 cases have you worked on in your career?

18 A. In the last 12 or 13 years, between 550 and 600.

19 Q. Do those include working -- looking at bulk
explosives?

20 A. Yes.

21 Q. Improvised explosive devices?

22 A. Yes.

23 Q. A residue analysis?

24 A. Yes.

25 Q. Component parts of bombs?

11632

Linda Jones - Direct

1 A. Yes.

2 Q. And explosives manufacturing?

3 A. Yes.

4 Q. Now, can you tell the jury approximately how many
bombing

5 crime scenes you've been to.

6 A. Probably about a dozen.

7 Q. And since you've worked on 550 to 600 cases, is it
8 necessary to go to a crime scene to make findings?

9 A. No. What tends to happen is that in England, we
get called

10 to the crime scene where the bombing is in some -- or
the crime

11 scene is in some way unusual. Sadly, we have more than
our

12 fair share of car bombs, which we regard as fairly
ordinary.

13 So we get invited to some of the more unusual types of
crime

14 scene.

15 Q. Even though you don't go to some of these crime
scenes, did

16 you make findings?

17 A. Yes.

18 Q. And specifically have you studied ammonium-nitrate-
based

19 bombs?

20 A. Yes.

21 Q. And why is that?

22 A. Because the IRA uses improvised ammonium-nitrate-
based

23 explosives in their large truck bombs.

24 Q. Do they mix ammonium nitrate with fuel oil?

25 A. Not fuel oil. Not now, no.

11633

Linda Jones - Direct

1 Q. What do they do?

2 A. They mix it with confectioner's sugar.

3 Q. Do they grind the ammonium nitrate when they do
that?

4 A. Yes, they do.

5 Q. And once you grind the ammonium nitrate and mix it
with

6 sugar, is it an explosive material?

7 A. Yes.

8 Q. Is it considered a blasting agent, or is it
considered a

9 high explosive?

10 A. It could be. It's a high explosive.

11 Q. And to detonate that, what would you need?

12 A. Some form of booster, which can be ammonium-
nitrate-based,

13 and a blasting cap. The systems the IRA use, they not
only

14 improvise their main explosive charge, they improvise
their

15 booster, which is again ammonium-nitrate-based with
detonating

16 cord, and they then use a blasting cap.

17 Q. So with your work investigating IRA bombings, have
you

18 become familiar with the chemical properties of
ammonium
19 nitrate?
20 A. Yes.
21 Q. And other ammonium-nitrate-based explosives?
22 A. Yes.
23 Q. And have you done testing with regard to ammonium
nitrate
24 and its chemical properties as an explosive?
25 A. Yes.

11634

Linda Jones - Direct

1 Q. Have you testified previously in cases both here
and in
2 England about ammonium-nitrate-based explosives?
3 A. Yes.
4 Q. Now, during your employment as a -- with DERA when
you were
5 doing forensic work, did you receive specific training?
6 A. Yes, I have.
7 Q. What type of training have you received?
8 A. When I came into the forensic lab, I already had
extensive
9 explosives experience and had attended courses in --
throughout
10 my Ministry of Defense career, in the composition of
11 explosives, their testing, their performance, their

safe

12 handling, how they would be used in a manufactured
form,
13 manufactured explosive devices; for example, those used
by the
14 military. And then when I came to the forensic lab, I
15 concentrated on the forensic side of the work, on how
to
16 examine things in a forensic context.

17 Q. In your work, do you do instrumental analysis for
chemical
18 residues?

19 A. Yes.

20 Q. And are you organized a little bit -- is your lab
and your
21 work organized a bit differently from the FBI Chemistry
and
22 Toxicology Unit?

23 A. Yes.

24 Q. Do you also look at the damage to the crime scene
itself?

25 A. Yes.

11635

Linda Jones - Direct

1 Q. And have you had experience doing that, looking at
truck
2 parts, buildings, and other witness material?

3 A. Yes, I have.

4 Q. And have you testified concerning that damage
previously?

5 A. Yes.

6 Q. Have you written any articles relating to
explosives

7 residue?

8 A. I'm not sure specifically about residue, but
forensic

9 explosives, yes.

10 Q. And about the investigations --

11 A. Yes.

12 Q. -- concerning those items?

13 Are you a member of any societies?

14 A. Yes. I am a member of the Institute of Explosives
15 Engineers.

16 Q. And in the past year, have you received any awards
for your

17 work in the forensic field?

18 A. Yes, I've been awarded the honor of Officer of The
Order of

19 the British Empire by her Majesty the Queen.

20 Q. When did you receive that?

21 A. I actually -- I was actually presented with it in
March

22 this year, but I was given it in her New Year's honors
list at

23 the beginning of this year.

24 Q. Now, did there come a time in this case when you
were

of the 25 contacted by the Government regarding the investigation

11636

Linda Jones - Direct

1 bombing crime scene?

2 A. Yes.

3 Q. Do you recall when that was?

4 A. Yes. It was March, 1996.

5 Q. What were you asked to do?

6 A. I was asked to provide an independent evaluation of
some

7 evidence.

8 Q. Since it was March of 1996, I take it you did not
go to the

9 crime scene --

10 A. No, I didn't.

11 Q. -- at that point?

12 A. Not at that time.

13 Q. What type of analysis were you supposed to conduct?

14 A. I reviewed videotapes, charts and plans, and some
items

15 recovered from the crime scene.

16 Q. Did you look at photographs?

17 A. Yes. Oh, I'm sorry, yes, and the photographs.

18 Q. And did you have access to any items that you
requested in

19 connection with the crime scene?

20 A. Yes, I did.

21 Q. Now, was there anything you weren't allowed to look
at?

22 A. On my first visit, I didn't review any chemical
evidence.

23 Q. And did you come to certain conclusions without
reviewing

24 the chemical evidence?

25 A. Yes, I did.

11637

Linda Jones - Direct

1 Q. Did you then review the chemical evidence?

2 A. Yes. I produced a first report based on the
videos, the

3 photos, some of the items from the crime scene, and the
charts

4 and plans.

5 And then after I had submitted my first
report, I was

6 asked to look at some chemical evidence from the crime
scene.

7 Q. Did you make additional findings based on that
chemical

8 evidence?

9 A. Yes, I did.

10 Q. And were you specifically precluded from looking at
FBI

11 Laboratory reports regarding the conclusions as to the
type of
12 bomb?
13 A. I saw no reports which detailed any conclusions of
the type
14 of bomb that had been used.
15 Q. All right. And have you ever seen such reports?
16 A. No.
17 Q. Tell us how you began your analysis in this case.
18 A. I began by coming to Denver and reviewing the photo
-- the
19 video and photographic evidence, some charts and plans
of the
20 crime scene, and looking at some of the pieces,
particularly of
21 the truck that were recovered from the crime scene.
22 Q. Did you do your own examination of those truck
parts?
23 A. Yes, I did.
24 Q. Okay. And did you follow the same procedure --
that is, in
25 reviewing documents and examining the debris -- when
you've

11638

Linda Jones - Direct

1 worked on cases back in England?
2 A. Generally, yes.

3 Q. Now, have you also become familiar with the
Government's

4 model of downtown Oklahoma City?

5 A. Yes.

6 Q. And would it assist you in showing the jury or
explaining

7 to the jury your findings as to the damage at the
Oklahoma City

8 bombing crime scene?

9 A. Yes, it will.

10 Q. Would it also assist you in describing the type of
11 explosive that you believe was used at the Murrah
Building?

12 A. Yes.

13 MS. WILKINSON: Your Honor, may the witness
step down?

14 THE WITNESS: Yes.

15 BY MS. WILKINSON:

16 Q. Now, Miss Jones, if you can turn and face the jury
so they

17 can hear you. You told us you reviewed some plans of
the

18 Murrah Building; is that right?

19 A. Yes.

20 Q. And did you see the plans of what the Murrah
Building

21 looked like before the explosion?

22 A. Yes.

23 Q. Is this building, marked the Murrah Building,
consistent

24 with those plans?

25 A. Yes.

11639

Linda Jones - Direct

review 1 Q. Take out this portion, this area. Did you also

2 photographs of the Murrah Building and the crater area?

3 A. Yes.

the 4 Q. And did you become familiar with the streets and

5 surrounding buildings in the Murrah -- from the Murrah

6 Building?

7 A. Yes, I did.

about the 8 Q. Now, can you tell the jury first what you noticed

9 damage to the building.

was that 10 A. The damage to the building, what struck me first

Murrah 11 it appeared that a large bite had been taken out of the

Street, 12 Building, and that had slid down predominantly into 5th

Building, 13 and that that site, the north side of the Murrah

14 there was a crater.

15 Q. And what did you notice about the crater?

16 A. The thing that impressed me most was the size.

From the

17 charts and the plans, it appeared that it was a big
crater. It

18 was of the order of 32 feet in diameter.

19 Q. Does the size of the crater assist you in any way
in

20 determining the size of the bomb that was used?

21 A. Very generally, yes.

22 Q. How is that?

23 A. It -- the size and shape of the crater will depend
very

24 much on the size and the shape of the bomb, but a
crater of

25 that size would be created by a big bomb.

11640

Linda Jones - Direct

1 Q. And what about the damage to the building that you
2 described?

3 A. Similarly, the building was extensively damaged.
As I

4 said, a large bite appeared to have been taken out of
5 approximately two-thirds of -- I know it's the rear
face, but

6 the face of the building fronting onto 5th Street.

7 Q. Did you select some photographs to show the jury
that would

8 depict for them the damage that you relied on in making
your

9 conclusions?

10 A. Yes.

11 Q. If you could take your seat, please.

12 Exhibit 848, Okay. I'm going to show you Government's

13 which I don't believe is in evidence yet.

14 Do you see that?

15 A. Yes.

16 Q. Do you recognize this photo?

17 A. Yes, I do.

18 Q. Does this depict -- is this one of the photographs
you

19 reviewed in doing your work?

20 A. Yes.

21 Q. What does it depict -- just briefly, 'cause it's
not in

22 evidence yet.

23 A. Oh. It shows the crater.

24 MS. WILKINSON: Your Honor, we'd offer 848.

25 MR. TIGAR: No objection, your Honor.

11641

Linda Jones - Direct

1 THE COURT: 848 received. You may proceed.

2 BY MS. WILKINSON:

3 Q. Now, Miss Jones, the jury can see what you see. So

could

4 you tell them what you noticed about the crater?

5 A. As I mentioned, the crater is big. This photograph
has

6 been taken very relatively soon after the explosion.
And you

7 can get an idea of the size of the crater --

8 Q. Miss Jones, if you'd like to use that pen there to
mark for

9 the jury --

10 A. Thank you.

11 Q. -- I think it's up top, right on the screen, and
then

12 they'll be able to tell what you're talking about.

13 A. Well, we've got the crater here. And if we look at
the

14 size of that, in comparison with the people standing
around it,

15 we can think of the people as providing some scale,
then we can

16 see that it's a big crater.

17 And then towards the right of the photograph,
we can

18 see where some of the rubble and the front of the
Murrah

19 Building has slid down towards the crater.

20 Q. Now if I could show you what's been marked as
Government's

21 Exhibit 854.

22 Will this photograph help you describe the
damage that

23 you saw to the building?

24 A. Yes, please.

Murrah

25 Q. And does it show -- is this a side view of the

11642

Linda Jones - Direct

1 Building?

2 A. Yes.

Government's

3 MS. WILKINSON: Your Honor, we'd offer

4 Exhibit 854.

5 MR. TIGAR: May I inquire briefly?

6 THE COURT: Yes.

7 VOIR DIRE EXAMINATION

8 BY MR. TIGAR:

9 Q. Good afternoon, Miss Jones.

10 A. Hello.

does it

11 Q. That picture that you're looking at: Does that --

see.

12 look like the crater has been filled in there? I can't

can't

13 A. No, I don't know -- I don't know. I can't see -- I

14 specifically identify the crater in this photograph.

15 Q. All right. And do you know when it was taken?

16 A. Not specifically, no.

any 17 MR. TIGAR: Your Honor, I don't think we have
being 18 objection. If I could know the purpose for which it's
19 offered.

But you 20 MS. WILKINSON: The damage to the building.
21 can see the date on there.

we have 22 MR. TIGAR: 4-19. Thank you very much. Once
23 the date, I have no objection. Thank you, your Honor.

24 THE COURT: It's received.

noted on the 25 MS. WILKINSON: Just for the record, it's

11643

Linda Jones - Voir Dire

you can 1 photograph. Government's Exhibit 854, I don't think
right 2 see on the screen -- yes, you can see it in the bottom
3 corner, April 19.

4 THE COURT: It's received.

5 DIRECT EXAMINATION CONTINUED

6 BY MS. WILKINSON:

7 Q. Now, Miss Jones, you said this was going to explain
8 something about the damage of the building to the jury.

9 Excuse me. If we could have the photograph

for the

10 jury.

11 A. Here we can see the damaged face of the Murrah
Building.

12 And we can see that a bite -- well, the bite that I
spoke of

13 has been taken out of this area of the building. And
the front

14 of the building has slid down. The crater, I think is
under

15 generally about this area. But rubble and debris has
fallen

16 into it. So this would be 5th Street; and on the other
side of

17 the photograph, along here, we see part of the parking
lot with

18 some damaged vehicles.

19 Q. Now, I'm going to ask you a specific question about
the

20 building, about how that assisted you in your
conclusions; but

21 before I do that, would it be fair to say that you have
to

22 consider everything that you're going to describe for
the jury

23 before you came to any conclusions?

24 A. Absolutely.

25 Q. With that in mind, could you tell us if you could
tell

Linda Jones - Direct

of the
Building?

1 anything about the speed or the velocity of detonation
2 explosive when you looked at the damage to the Murrah

the
sort of
explosive
a

3 A. In general, the damage to the Murrah Building and
4 vehicles in the parking lot -- I concluded that the
5 explosive that was indicated was a high-performance
6 of midrange velocity and performance. It was generally
7 heaving- and a pushing-effect explosive, rather than a
8 shattering explosive.

there,
explosive

9 Q. All right. Now that you've put all those terms out
10 why don't you tell us what a pushing and a heaving
11 is.

operation where

12 A. If we think of an explosive of a quarrying
13 what you want to do is bring down a rock face to
produce fairly
whatever,
will
little

14 large materials for -- I don't know, as aggregate or
15 then you will use a certain type of explosive, one that
16 heave and push, rather than shatter the material into
17 tiny pebbles.

18 Q. And is there a term that you use for the shattering
effect?

19 A. Yes. All high-performance explosives will have
some degree

20 of shattering effect, and that shattering effect is
termed

21 "brisance."

22 Q. Now, then, what is the effect between that midrange
23 velocity of detonation that you've talked about and the
higher

24 range?

25 A. All high-performance explosives can detonate; that
is, set

11645

Linda Jones - Direct

1 up a shock wave to pass through them. And that can
range

2 anything from around 6,000 feet per second to well over
3 20,000 feet per second. And in the higher range, it's
not just

4 the velocity of detonation but very generally towards
the

5 higher end, the explosives will exhibit more shattering
6 effects.

7 Q. And the damage to the Murrah Building you saw was
8 consistent with which range?

9 A. The heaving, pushing midrange.

10 Q. Did you see similar or consistent damage to the

cars in the

11 parking lot?

12 A. Yes, I did.

13 Q. Now, did you assist in constructing a chart that
would show

14 the different velocities of detonation you could use to
just

15 demonstrate to the jury what you've just described?

16 A. Yes.

17 MS. WILKINSON: Your Honor, we'd offer
Government's

18 Exhibit 695 just for demonstrative purposes.

19 MR. TIGAR: No objection, your Honor.

20 THE COURT: Received for demonstrative
purpose.

21 BY MS. WILKINSON:

22 Q. Miss Jones, if you could start on the left and tell
us

23 what -- beginning with the high category, what we're
seeing

24 here.

25 A. On the left of the chart, we've got the detonation

11646

Linda Jones - Direct

1 velocities in feet per second, the next column gives
examples

2 of the sorts of explosives that would fall into that
category,

sort of 3 and the right-hand column gives information about the
explosives 4 effect you would be likely to observe when those
5 were detonated.

6 Q. Let's start with the examples you have for the high
7 velocity explosives. What are they?

at over 8 A. The high-velocity explosives, that's that detonate
9 20,000 feet per second, include some military
explosives, such

10 as your C-4 and Semtex. And they're used predominantly
to

11 shatter matter. They might be used in military
operations in

12 some sorts of shells, to breach tanks or metal
structures.

13 Q. Below that you have examples for the medium range
velocity;

14 is that right?

15 A. Yes. Very generally they can be regarded as
detonating

16 between approximately 9- to 20,000 feet per second.

17 Q. What are examples of those types of explosives?

dynamite, 18 A. Some commercial blasting explosives, such as

19 ammonium nitrate fuel oils, and water gels.

20 Q. And those are the ones that you described to us
have that

21 pushing and heaving effect?

22 A. That's right, yes.
23 Q. Does that mean from this chart that if you had a
midrange
24 velocity explosive, there would be no shattering to
metal?
25 A. No, there would be some shattering.

11647

Linda Jones - Direct

1 Q. Why is that?
2 A. Because all high-performance explosives have some
3 shattering potential. It's just with the medium range,
the
4 heaving and pushing will be the dominant feature.
5 Q. And do you have to look, if you're at a crime scene
-- do
6 you have to look at the entire crime scene to make that
7 determination?
8 A. Yes.
9 Q. Now, down below, you have low explosives?
10 A. They're high-performance explosives, but in the
lower of
11 the three detonation velocity ranges. And we're
looking now at
12 the relatively slow shock waves that might go from
about 6- to
13 9,000 feet per second.
14 Some commercial explosives fall into that
category.

15 For example, some dynamites and water gels that could
be used
16 in underground coal blasting where you want to give it
-- the
17 rock face more of a nudge than the blasting it away.
18 Q. Now, just to be clear, then, so I don't use the
wrong
19 terminology, these are all what you refer to as
20 high-performance explosives?
21 A. Yes. They all set up a supersonic shock wave.
22 Q. And that's what detonation is?
23 A. That's what detonation is, yes.
24 Q. So these are categories within high-performance
explosives?
25 A. Yes.

11648

Linda Jones - Direct

1 Q. Now, did you select some photographs of cars in the
parking
2 lot to explain to the jury the damage that you saw
there?
3 A. Yes, I did.
4 Q. Let me show you Government's Exhibit 847.
5 Do you recognize that photograph?
6 A. Yes, I do.
7 Q. Does that show the parking lot area in front of the
Murrah

8 Building?

9 A. Yes.

10 MS. WILKINSON: Your Honor, we'd offer 847.

11 MR. TIGAR: No objection, your Honor.

12 THE COURT: Received.

13 BY MS. WILKINSON:

14 Q. Tell the jury what you can see from this
photograph,

15 Miss Jones.

16 A. If we concentrate on the parking lot, although it's
quite a

17 distant photograph, we can see that a lot of the
vehicles

18 appear to have been displaced from where they were
originally

19 positioned. I don't think they'd have been parked
quite this

20 randomly. We can see some of them have been moved, and
there

21 appears to be a variety of damage to them.

22 Q. If we can, let's move on to Government's Exhibit
827, which

23 is already in evidence.

24 Do you recognize this photograph?

25 A. Yes, I do.

1 Q. What's depicted here?

2 A. This is the remains of a no-parking sign which was
3 positioned across the street in front of the parking
lot from
4 the Murrah Building.

5 Q. And I'm going to show you that street sign.
Government's

6 Exhibit 826. Did you examine this before coming to
court
7 today?

8 A. Yes, I did. Thank you.

9 Q. And did that assist you in coming to your
conclusions about

10 the type of bomb used in the Murrah Building?

11 A. Yes.

12 Q. How so?

13 A. The bending of this piece of the sign was bent away
from
14 the Murrah Building. So a blast had come from in front
of the
15 Murrah Building and hit this no-parking sign.

16 But equally as important is the damage to the
no-
17 parking sign. It's been subjected to various shrapnel
damage.

18 Fragments of whatever have hit the sign from -- the
painted

19 surface and traveled through it. It's not shattered,
it's bent

20 and buckled and been penetrated by shrapnel.

street 21 Q. What would have propelled that shrapnel into the

22 sign?

23 A. The blast from the explosion.

or 24 Q. And does the blast from the explosion collect items

25 fragments that traveled with the blast wave?

11650

Linda Jones - Direct

itself 1 A. That's right. Fragments from the explosive device

high speeds 2 and from the surroundings will be projected at very

3 in the blast wave.

4 Q. How does that occur?

initially 5 A. When an explosive detonates, the shock wave

be 6 passes through the explosive. At that stage, it will

and 7 traveling at miles a second. It then hits the outside

container 8 damages and breaches and to some extent shatters the

container or 9 the explosive is in. And then fragments of any

which is 10 anything else that's in the path of the blast wave,

very high 11 like a giant tidal wave, will carry items forward at

12 speeds which impact anything else in its pathway.

13 Q. Is there any way to predict what pieces will
survive when

14 an improvised explosive device detonates in a
container?

15 A. Very generally, with a little more information. To
some

16 extent, yes, but not . . . not unequivocally because
it's a

17 relatively random event.

18 Q. What other types of information would you need to
know?

19 A. To know what's going to survive, you really need to
know --

20 or to be able to estimate what might survive, you
really need

21 to know how the bomb itself was made and what it
contained.

22 Q. Do you need to know the size?

23 A. Yes. In general terms, yes.

24 Q. Now, did you also look at several photographs of
the actual

25 cars that were in the parking lot?

11651

Linda Jones - Direct

1 A. Yes.

2 Q. Did that assist you in coming to your conclusions?

3 A. Yes, it did.

4 Q. Let me show you Government's Exhibit 850.

5 Do you recognize this photograph?

6 A. Yes, I do.

7 Q. And is this a photograph of the parking lot?

8 A. Yes.

9 MS. WILKINSON: Government would offer 850.

10 MR. TIGAR: No objection.

11 THE COURT: Received.

12 BY MS. WILKINSON:

13 Q. Tell the jury what you noticed about the cars in
the

14 parking lot from this photograph.

15 A. Thank you.

16 Here we've got a closer shot of the parking
lot. And

17 again, as I mentioned, some of the vehicles have been

18 displaced. Some of them have been fire-damaged. I
think

19 perhaps some here. And certainly these in this general
area.

20 Also, some of them have been ripped apart.
Again,

21 this is quite a distant shot to look at specific
damage; but we

22 can see that they're damaged and buckled, and some
parts of

23 them are missing.

24 Q. Let me show you now Government's Exhibit 852. Is
this a

vehicles 25 closer shot that shows you some of the damage to the

11652

Linda Jones - Direct

1 in the parking lot?

2 A. Yes, it is.

3 MS. WILKINSON: Your Honor, we offer 852.

4 MR. TIGAR: No objection.

5 THE COURT: Received.

6 BY MS. WILKINSON:

7 Q. What does this show us, Miss Jones?

this 8 A. This shows more particular damage. Here we can see

and 9 vehicle. Whoops. Some of the body panels are crumpled

general 10 dished inwards. I think its tire's missing. But the

and 11 area over here, we can see that vehicles have rolled

pushing 12 tumbled. There's been a crumpling and heaving and

appears to 13 effect on them. But most importantly, the damage

The 14 have been inflicted to them from the outside of them.

15 damage didn't occur from the inside to the outside.

explosive 16 Q. So what does that tell you about the improvised

Building? 17 or the bomb that was used in the front of the Murrah

and 18 A. It tells me that the bomb consisted of a pushing-

these 19 heaving-type explosive and that the bomb wasn't in

20 vehicles.

that 21 Q. And what about the fire damage that you saw: Is

device 22 consistent, or inconsistent, with having one improvised

23 in front of the building, the Murrah Building?

fire 24 A. That's totally consistent. In my experience, the

will catch 25 damage tends to be rather random; that some vehicles

11653

Linda Jones - Direct

the same 1 fire, almost as a spot fire, whereas other vehicles in

2 general area of the blast wave won't catch fire.

if we 3 Q. Let's look at one last photograph of the vehicles,

4 could, Government's Exhibit 851.

5 Is this photograph significant to you?

6 A. Yes, it is.

lot? 7 Q. Does it show damage to the vehicles in the parking

8 A. Yes.

9 MS. WILKINSON: Your Honor, we'd offer 851.

10 MR. TIGAR: No objection, your Honor.

11 THE COURT: Received.

12 BY MS. WILKINSON:

13 Q. Tell the jury what's significant in this
photograph.

14 A. We can see some vehicles that have been flipped and
tumbled

15 and stacked upon each other. We can see one vehicle
down here.

16 These wheels here are from another vehicle that has
tumbled.

17 Its body work has been ripped off, and it's come to
rest on top

18 of the vehicle underneath.

19 But again, the body panels of the lower
vehicle are

20 crumpled and twisted and torn.

21 Q. And did that assist you in determining what type of
22 explosive, or at least the range of the velocity of
detonation

23 of the explosive that was used in front of the Murrah
Building?

24 A. Yes. In very general terms, yes.

25 Q. How is that?

1 A. Again, it indicated a pushing- and heaving-type
explosive.

2 Q. Now, in examining these photographs -- have you
examined

3 the Ford truck parts identified by Mr. Paddock?

4 A. Yes, I have.

5 Q. And have you examined the location of their
recovery at the

6 crime scene?

7 A. Yes.

8 Q. Was that of significance to you in determining what
type of

9 container was used to house this explosive device?

10 A. Very much so, yes.

11 Q. And were you able to determine what type of
container was

12 used?

13 A. Yes.

14 Q. And what was that?

15 A. I concluded that the bomb was contained in the
load-

16 carrying compartment of a Ryder truck.

17 Q. Were you able to determine in what direction the
vehicle

18 was parked before it was detonated?

19 A. Yes.

20 Q. And could you explain that to the jury by pointing
out some

21 of the pieces that were recovered?

22 A. Yes.

23 Q. Could you also show the jury some of the damage
that you

24 saw to the actual vehicle parts?

25 A. Yes.

11655

Linda Jones - Direct

1 MS. WILKINSON: Your Honor, may the witness
step down?

2 THE COURT: Yes.

3 BY MS. WILKINSON:

4 Q. Miss Jones, we didn't wheel in all the pieces; but
you're

5 familiar with some -- with the locations of some of the
truck

6 parts; is that right?

7 A. Yes, I am.

8 Q. And do you recall where the front axle of the Ryder
truck

9 was recovered?

10 A. Yes. The front axle had traveled in an easterly
direction

11 and come to rest approximately 700 feet from the crater
along

12 N.W. 5th Street.

13 Q. Is that right before Broadway?

14 A. Yes.

the 15 Q. And are you familiar with where the rear axle of

16 vehicle was recovered?

direction 17 A. Yes. The rear axle had traveled in a westerly

about 18 along 5th Street and come to rest -- I think it was

building. 19 600 feet from the crater, outside the Regency Tower

major 20 Q. And did you review the location of any of the other

21 parts of the truck that were recovered?

22 A. Yes.

for the 23 Q. All right. And can you point those out generally

24 jury?

The 25 A. The -- four of the wheels were important to me.

11656

Linda Jones - Direct

Murrah 1 remains of two wheels were recovered from inside the

North 2 Building. One wheel had come to rest beneath a tree on

Street 3 Robinson, and another wheel had come to rest along 5th

building. 4 between St. Joseph's Rectory and the Firestone
That

5 told me that the wheels -- the wheels being on each

corner of

6 the vehicle had gone in different directions.

7 Q. And was that consistent with your observations
about the

8 recovery location of the front axle and the rear axle?

9 A. Yes.

10 Q. What did you determine about the location of the
vehicle

11 prior to detonation?

12 A. I concluded that prior to detonation, the vehicle
was

13 positioned in the area where the crater now is. It was
parked

14 approximately midway or perhaps slightly easterly of
the nine-

15 story section of the Murrah Building, and its cab would
have

16 been facing eastwards; that is, towards North Robinson.

17 Q. And if 5th Street is one way this way, was the
vehicle

18 parked going in the same direction as traffic?

19 A. Yes.

20 Q. Now, did you also look at certain vehicle parts for
damage?

21 A. Yes, I did.

22 Q. And have you brought some of those into the
courtroom

23 today?

24 A. Not personally. They've been brought here for me.

25 Q. Okay. Let me start by giving you a very small

piece,

11657

Linda Jones - Direct

1 Government's Exhibit 720. Did you examine that?

2 A. Thank you. Yes, I did.

3 Q. What did you determine?

4 A. I concluded this piece of metal had been very close
to an
5 explosion.

6 Q. How did you conclude that?

7 A. From the fact that I was aware that this had
originally
8 been part of a frame rail from a truck, and I knew that
-- I
9 knew that a frame rail is a substantial piece of metal.

And
10 for the fragment to get in this size, it had been
subjected to
11 a very strong force.

12 But also, there's a small -- it's almost
covered by

13 the label, but there's a small little pit or crater on
this

14 piece of metal which is indicative of a high-
performance

15 explosive having detonated near to it.

16 Q. Did you find other items from the crime scene that
had that

17 pitting and cratering?

18 A. Yes, I did.

19 Q. Let me show you Government's Exhibit 654. Do you
recognize

20 that?

21 A. Thank you. Yes, I do.

22 Q. Did you examine that?

23 A. Yes.

24 Q. What did you determine?

25 A. I concluded that this piece of metal had been close
to

11658

Linda Jones - Direct

1 the -- to an explosive event, particularly by the
damage to it

2 and a large area of pitting and cratering.

3 Q. And what is the -- can you describe for the jury in
holding

4 it up what you're talking about when you say "pitting
and

5 cratering"?

6 A. Yes. When I'm talking about the pitting and
cratering, I'm

7 talking -- I mean these little dents and indentations
which are

8 characteristic of a high-performance explosive event
having

9 occurred close to them, because when the blast wave

comes out

10 of the bomb, it will be carrying big and small pieces
of debris

11 and also unconsumed particles of explosives; and also
there

12 will be the hot gases washing over the surface which
create

13 these little almost moon craters.

14 Q. And did you compare this to a piece of the Ryder
truck that

15 was brought in by Mr. Paddock, the next Ryder truck off
the

16 line?

17 A. Yes, I did.

18 Q. All right. Let me get that for you.

19 Excuse me. I'm going to show you what's been
marked

20 for demonstrative purposes Government's Exhibit 655.
Do you

21 recognize this?

22 A. Yes, I do.

23 Q. Would this assist you in explaining to the jury
some of

24 your findings?

25 A. Yes.

11659

Linda Jones - Direct

1 MS. WILKINSON: Your Honor, we'd offer 655 for

2 demonstrative purposes.

3 MR. TIGAR: No objection.

4 THE COURT: Received.

5 BY MS. WILKINSON:

6 Q. Why don't you hold it up and you tell the jury what
you

7 found about the piece you have in your hand.

8 A. Yes, just get my bearings.

9 Q. There you go.

10 A. The damaged piece has lost its lever, but this
piece of
11 metal would have originally been mounted on the outside
of the
12 rear roll-up door of a Ryder truck. So the pitted and
cratered
13 surface, this side, would have been against the outside
of the
14 painted surface of the truck.

15 Q. What does that tell you about the location of the
explosive
16 device in the truck?

17 A. That the explosive device was in the box
compartment of the
18 truck.

19 Q. You told us that you examined several wheel rims
that were
20 found?

21 A. Yes.

22 Q. And did you examine Government's Exhibit 722?

23 A. Yes, I did.

24 Q. And what can you tell us about the damage to
Government's

25 Exhibit 722?

11660

Linda Jones - Direct

1 A. It's buckled and twisted, and in some places it's
torn.

2 It's not shattered. It's crumpled and bent and
buckled.

3 Q. What does that tell you about the explosive device
used in

4 front of the Murrah Building?

5 A. That it was of midrange, heaving and pushing
performance

6 and velocity.

7 Q. I don't know if the two of us can lift this, but
this is

8 Government's Exhibit 787.

9 Did you examine -- did you examine this for
explosive

10 damage?

11 A. Yes.

12 Q. And what did you determine?

13 A. I concluded that this again had been bent and
twisted and

14 torn, rather than shattered. This is one of the pieces
of

15 frame rail.

bent? 16 Q. Can you show the jury some of the areas that were

17 A. Yes. This piece would have originally been a C
section, so

18 we can see it's been peeled open and just generally
twisted and

19 distorted.

20 Q. Did that assist you in making your findings as to
what type

21 of explosive was used?

22 A. Yes.

23 Q. What did it tell you?

24 A. Again, it told me that it was a midrange velocity
and

25 performance explosive.

11661

Linda Jones - Direct

1 Q. Were you also informed that a portion of the frame
rail was

2 found on top of a building approximately a block and a
half to

3 two blocks away from the Murrah Building?

4 A. Yes. I was.

5 Q. And what did that tell you about the size of the
device or

6 the power of the device?

smaller
7 A. Again, it was a big bomb for a piece of -- it was
8 than that this -- but for a piece of frame rail to have
9 projected from the seat of the explosion in N.W. 5th
10 over these buildings to land on a roof on 6th Street.

examine
11 Q. And here we have Government's Exhibit 713. Did you
12 that?

13 A. Yes, I did.

crime
14 Q. And do you recall where that was recovered at the
15 scene?

the
16 A. Yes. That -- this fragment originated from part of
17 rear axle, part of the differential housing from the
18 rear axle,
19 so it would have been the back of the truck. And we
20 said that
21 the -- we established that the rear axle had come to
22 rest
23 outside the Regency Tower. That piece of metal had
24 gone
25 further than that in the same general direction, I
think
26 approximately 800 feet.

the power
27 Q. And did that tell you something about the size or
28 of the bomb?

29 A. Yes. It was a big bomb.

11662

Linda Jones - Direct

1 Q. You can take your seat.

2 Now, you described for us on the rear door
latch, the

3 pitting and craters?

4 A. Yes.

5 Q. Is that right? Did that tell you anything about
the type

6 of explosive that was used?

7 A. Again, I concluded it was a midrange velocity
because the

8 latch hadn't been shattered.

9 Q. Are you able to determine from pitting and
cratering with

10 any more specificity -- excuse me -- specificity, the
exact

11 velocity of detonation of the explosive?

12 A. No.

13 Q. That just gives you a range?

14 A. That's right, yes.

15 Q. Now, after you conducted this examination, did you
also

16 review the chemical findings by Mr. Burmeister of Q507?

17 A. Yes, I did.

18 Q. Did you examine Q507, yourself?

19 A. Yes.

findings 20 Q. And do you have an opinion about Mr. Burmeister's
21 of ammonium nitrate on Q507?
22 A. Yes.
23 Q. What are they?
removed 24 A. I concluded that the crystals that Mr. Burmeister
25 from Q507 were ammonium nitrate.

11663

Linda Jones - Direct

explosive 1 Q. Did that assist you in determining what type of
2 could have been used in front of the Murrah Building?

3 A. In conjunction with the damage to Q507.

Honor. 4 MR. TIGAR: Objection to could have been, your

5 BY MS. WILKINSON:

6 Q. Well, that's consistent with?

7 THE COURT: All right.

bit 8 THE WITNESS: I'm sorry, could we start that
9 again.

10 BY MS. WILKINSON:

Burmeister's 11 Q. Sure. Based on your conclusions about Mr.

12 work on Q507 and all the damage, can you determine what

findings and 13 explosive would be consistent with the chemical
14 the damage?
15 A. Yes.
16 Q. What did you find?
with a 17 A. I concluded that all the findings were consistent
18 bomb containing or including an ammonium-nitrate-based
19 explosive.
exact 20 Q. Now, with that in mind, could you tell the jury the
19? 21 explosive that was used at the Murrah Building on April
22 A. No.
23 Q. Why not?
24 A. Because the bomb had detonated efficiently and only
nitrate 25 ammonium nitrate crystals were recovered. The ammonium

11664

Linda Jones - Direct

1 wouldn't have been there on its own. As part of the
ammonium 2 explosive -- the explosive wouldn't only have been
3 nitrate.
4 Q. Is the finding of ammonium nitrate consistent with
the use 5 of ammonium nitrate and a fuel?

6 A. It could be, yes.

7 Q. Is it consistent with the use of an ammonium-
nitrate-based

8 explosive like dynamite?

9 A. It could be, although the ammonium nitrate
dynamites I'm

10 familiar with also include nitroglycerine explosive;
and --

11 Q. Go ahead.

12 A. And if I found ammonium nitrate crystals, if I'd
got as

13 much as -- enough to see, I would also expect to find
some

14 nitroglycerine.

15 Q. It's your understanding there wasn't nitroglycerine
found

16 on Q507?

17 A. That's right. To the best of my knowledge, no
organic

18 explosives were found on Q507.

19 Q. Based on your examination, can you tell the jury
whether

20 this ammonium-nitrate-based explosive was used in the
main

21 charge or in the booster?

22 A. The finding of the crystals would suggest it was in
the

23 main charge. I don't know if it was also in the
booster.

24 Q. And are you aware that no other high -- or no

25 high-explosive residues were found at the crime scene?

11665

Linda Jones - Direct

1 A. Yes.

2 Q. And is that consistent or inconsistent with a
large,

3 improvised explosive device being used in front of the
Murrah
4 Building?

5 A. Consistent.

6 Q. Why is that?

7 A. Some of the best materials for residue analysis
will come

8 from components that were very close to the bomb, the
center of

9 the explosion. And with a large -- particularly large
bomb,

10 those pieces are likely to be shattered and not
recovered.

11 Q. Have you come to any conclusions about the size of
the bomb

12 used in front of the Murrah Building on April 19?

13 A. Yes. I concluded that it was a large bomb, and I
estimated

14 it would be of the order of 3,000 to 6,000 pounds of
explosive.

15 Q. And if something like Primadet shock tube had been
used to

16 construct the explosive device in front of the Murrah
Building,

blast? 17 would you expect the orange shock tube to survive the

18 A. Certainly not.

19 Q. Why not?

of the 20 A. Because the shock tube would be at the very heart

consumed 21 explosive device, and I would expect that it would be

22 in the explosion.

device? 23 Q. What if blasting caps were used to construct the

survive the 24 Would you expect fragments of the blasting cap to

25 blast?

11666

Linda Jones - Direct

1 A. No.

2 Q. Why not?

the center 3 A. Again because the blasting cap is going to be in

it 4 or very seat of the explosion; and like any shock tube,

explosive 5 would be a very small component relative to the main

6 charge, and I would expect it to be consumed beyond

7 recognition.

improvised 8 Q. You've told us that you believe that this

9 explosive device operated efficiently; is that right?

10 A. Yes.

11 Q. What do you mean by that?

12 A. I mean that it went off properly; that it didn't
partially

13 explode; that it detonated successfully.

14 Q. Does that mean that no residues or no fragments
would be

15 left behind?

16 A. No. Fragments and residues are always left behind.
The

17 problem is locating and recovering them.

18 Q. As part of your analysis, were you asked to review
plastic

19 fragments that were recovered from the crime scene?

20 A. Yes, I did.

21 Q. And did you review -- I'm going to hand up to you
786, 785,

22 and 786B, which also have Q designators of 112 and 116.

23 A. Yes, I've seen these before.

24 Q. And did you come to any conclusions about those
plastic

25 fragments?

11667

Linda Jones - Direct

1 A. Yes. I concluded some of them had been close to an

2 explosive event.

those 3 Q. And how did you determine that those -- some of

event? 4 fragments had been in close proximity to an explosive

blackened, 5 A. By their appearance. That some of them are

they're 6 although I don't think they're particularly burned, but

they've 7 shredded and damaged and distorted. It's almost as if

8 been chewed.

interaction of 9 Q. Now, you told us you're familiar with the

10 plastics and explosives; is that right?

11 A. Yes.

close 12 Q. Why is it, Miss Jones, that if that plastic was in

or 13 proximity to the explosion, it didn't just melt or burn

14 disintegrate?

And I 15 A. These fragments are quite thick pieces of plastic.

16 don't know how close they were to the explosion or the

and 17 explosive, but I concluded they're fairly light pieces,

bombing 18 they could have been projected from the area of the

19 almost ahead of the blast wave.

20 Q. If they were -- if they were contained -- or from

21 containers of ammonium nitrate and a fuel, could they

have

for us? 22 survived a large explosion of the type you've described

23 A. It's possible, yes. An explosion of any sort -- an
I 24 improvised explosion of any sort is a random event, so

25 wouldn't be particularly surprised.

11668

Linda Jones - Direct

1 Q. But you can't tell us how close these fragments
were to the

2 blast; is that right?

3 A. Not specifically, no.

4 Q. Can you tell whether they were inside the building
prior to
5 the explosion?

6 A. No, although the ones that were found outside -- I
know

7 some of them were found outside the building. And
based on

8 that, I conclude that they wouldn't have been thrown --
I think

9 some of them were some distance from the building. And
because

10 the blast pushed into the Murrah Building, I wouldn't
expect

11 the plastic to be thrown out for such a distance.

12 Q. Okay. So if some of that plastic was found here on
the

13 roof of the Journal Record Building and the crater is
here,
14 what do you conclude about the fragments that were here
on the
15 Journal Record Building?
16 A. I would conclude that the plastic was either in or
close to
17 the truck when it exploded.
18 Q. And what fragments that were found on the outside
of the
19 Murrah Building over here on what's marked as "Murrah
west
20 side"?
21 A. Similarly the plastic appears to have gone in a
variety of
22 directions, which again we said that the blast comes
out
23 radially from its seat in the truck. So, again, it
would
24 suggest that the plastic was close to or in the Ryder
truck.
25 Q. Let's go back to that, if we could. Did you
determine

11669

Linda Jones - Direct

1 whether the crater was the location of the explosive
device?
2 A. Yes, I concluded the Ryder truck was parked over
where the

3 crater now is.

4 Q. All right. And when it detonated, did you see a
pattern of

5 damage in the downtown Oklahoma City area?

6 A. Yes.

7 Q. What was that pattern?

8 A. The pattern was radially from the seat of the
explosion,

9 from the crater. The damage emanated in all
directions.

10 Q. Did you make any conclusions about how many
explosive

11 devices were used to cause the damage to the Murrah
Building

12 and surrounding area?

13 A. From what I saw, I concluded there was one
explosive

14 device.

15 Q. Did you conclude that it was manufactured or
improvised?

16 A. Improvised.

17 Q. Did you conclude how it was transported and
contained?

18 A. It was contained in the load-carrying box
compartment of a

19 Ryder truck.

20 Q. Did you determine the range of the velocity of the
21 detonation of the explosive?

22 A. I concluded it was a midrange velocity and
performance --

23 high-performance detonating explosive.

it was 24 Q. And you already told us that it was -- could be --
25 consistent with an ammonium-nitrate-based explosive?

11670

Linda Jones - Direct

1 A. Yes, it was.

2 Q. You also told us the size; is that right?

3 A. Yes, between 3- and 6,000 pounds.

initiation 4 Q. Did you make any conclusions about the type of
5 used to detonate this device?

been -- 6 A. Very generally. I concluded that there would have

of 7 likely to have been some form of booster and some form

was 8 blasting cap. What I wasn't able to determine was what

to set 9 used to set the explosion off. For example, bombs --

of delay 10 off a bomb, to protect the bomber, you need some sort

starting 11 between -- you need to put some distance between you

bomb 12 the explosive chain of events, as the bomber, and the

do that 13 exploding so you've got time to get away. Now, you can

14 with something like an electrical circuit with a timer

in it,

15 or it can be a very straightforward sort of burning
fuse.

16 But from what I saw, no evidence of any timing
17 mechanism were recovered.

18 Q. Can you tell the jury how difficult it would be for
someone

19 to build a bomb of this size and type?

20 A. For someone with a basic knowledge of explosives
and the

21 materials available to them, it would be simple.

22 Q. And if you had the materials such as ammonium
nitrate,

23 nitromethane, det cord, Primadet, and blasting caps,
could you?

24 MR. TIGAR: Object to the nitromethane, your
Honor.

25 There is no evidence from this witness about the
possibility of

11671

Linda Jones - Direct

1 such a thing.

2 THE COURT: Well, this is a hypothetical
question.

3 MS. WILKINSON: Yes.

4 MR. TIGAR: Okay. All right.

5 BY MS. WILKINSON:

6 Q. Could you manufacture or build such a device?

7 A. Yes.

8 Q. Can you tell the jury how many people it would take
to
9 construct a device that you've described.

10 A. One person could do it on their own. More than one
person
11 could do it quicker.

12 MS. WILKINSON: We have no further questions,
your
13 Honor.

14 THE COURT: We'll take our recess before the
cross.

15 MR. TIGAR: All right.

16 THE COURT: You may step down now.

17 Members of the jury, we're going to take our
usual

18 20-minute rest stop during which, again, please
continue to

19 follow the cautions given always when we stop in recess
of

20 avoiding discussion of the case or anything about it
and

21 avoiding anything outside of the evidence.

22 You're excused now, 20 minutes.

23 (Jury out at 3:20 p.m.)

24 THE COURT: We'll recess.

25 (Recess at 3:20 p.m.)

1 (Reconvened at 3:39 p.m.)

2 THE COURT: Please be seated.

3 (Jury in at 3:40 p.m.)

4 THE COURT: If you'll resume the stand,
please,

5 Ms. Jones.

6 THE WITNESS: Thank you, your Honor.

7 THE COURT: Mr. Tigar.

8 CROSS-EXAMINATION

9 BY MR. TIGAR:

10 Q. Good afternoon, Ms. Jones.

11 A. Good afternoon.

12 Q. You -- you are an officer of the British Empire.
Is that
13 correct?

14 A. Yes.

15 Q. And you joined such luminaries as my favorite
author,
16 Gerald Durrell, in that and many other people who have
17 accomplished a great deal. Is that right?

18 A. Yes.

19 Q. Now, you had the opportunity over the time you were
working
20 on this case to review the evidence that had been
assembled at
21 the Murrah Building crime scene; is that correct?

22 A. Yes.

of the 23 Q. And in some -- you had questions that you would ask
24 agents and they would answer them; correct?

25 A. Yes.

11673

Linda Jones - Cross

time in 1 Q. Now, in your -- in your work, this is not the first
experts 2 which you have had to review work conducted by forensic
3 and agents from another country, is it?

4 A. That's right.

from 5 Q. And when you review work that's been done by agents
what 6 another country, you look at it from the standpoint of
7 your own standards are; is that correct?

8 A. Yes.

you were 9 Q. For example, in the case of the Queen vs. Zekra,
that had 10 limited in what examinations you could do of samples
another 11 been previously obtained by another police service in
is that 12 country because you didn't know how they were handled;
13 correct? Do you recall that?

but I'm 14 A. Not -- I remember the case involving Mrs. Zekra,
15 not sure which piece of the evidence you're referring
to.

16 Q. Well, in that case the Israelis had found
components or

17 signs of PTA. Do you recall that?

18 A. No, there had been an indication.

19 Q. And you said that you didn't know how the samples
were

20 taken, how they were packaged, how they were sampled,
or how

21 they were protected against cross-contamination, so you
didn't

22 examine any soil samples from the crater in that case.
Do you

23 recall that?

24 A. I didn't examine any soil samples from the crater
in that

25 case but not because of what you said to start with.

11674

Linda Jones - Cross

1 Q. Well, I'm asking you whether -- that case was tried
in the

2 Central Criminal Court; is that right?

3 A. In London, yes, that is right.

4 Q. And that was in Courtroom No. 1 in the Old Bailey;
is that

5 right?

2, but 6 A. I can't remember whether it was Courtroom No. 1 or

old 7 it was certainly at the Central Criminal Court in the

8 Bailey.

"I don't 9 Q. And my question is do you recall testifying there

packaged, how 10 know how the samples were taken, how they were

cross- 11 they were sampled, or how they were protected against

from the 12 contamination, so I didn't examine any soil samples

13 crater"?

taken the 14 A. I remember not knowing how the Israeli people had

samples as 15 samples, but I don't remember saying about the soil

said. 16 a direct lead-on from the -- the first part of what you

that 17 Q. Well, let me show you this transcript and ask if

18 refreshes -- excuse me.

19 I'm taking a trip, your Honor.

20 At the bottom, ma'am.

21 A. Thank you.

Lordship and 22 Q. -- if you recall saying that in front of his

23 the members of the jury on that occasion.

24 A. That's right. What you read is what I said, but I

don't

25 know without reading the rest of the transcript -- I
don't have

11675

Linda Jones - Cross

1 the context of the soil samples.

2 Q. I understand. I'm not going to ask you about that.
That's

3 another case.

4 My question is in that case in which Mrs.
Zakra was

5 charged, did you have some concern about how evidence
had been

6 handled by the police service of another country?

7 A. I didn't have any information at all about what --
how --

8 the samples the Israeli personnel obtained. I knew
nothing

9 about how the samples were recovered, packaged or
analyzed,

10 other than they were screened only using an EGIS
machine.

11 Q. And is it correct that you are as a forensic
scientist

12 concerned about how samples are obtained in the field
and then

13 handled on their way to the laboratory where they can
be

14 analyzed?

15 A. Absolutely.

16 Q. And that is a legitimate subject of inquiry; is
that

17 correct?

18 A. Most certainly, yes.

19 Q. And it's also a legitimate subject of inquiry to
ask what

20 kinds of documentation is used by the police officials
out in

21 the field in how they collect the evidence. Correct?

22 A. Yes.

23 Q. In the United Kingdom, it is the habit of police
officials

24 at bombing crime scenes to use videotape; correct?

25 A. At some scenes they do but not at all scenes.

11676

Linda Jones - Cross

1 Q. I understand. Well, in -- what's the most recent
important

2 bombing case in which you have given evidence? Would
that be

3 the Queen vs. Gannon and others?

4 A. I was in court the week before last in an IRA
trial.

5 Q. Do you remember -- I'm sorry.

6 A. I think the Gannon case was perhaps back in May.

7 Q. In the spring of this year; correct?

8 A. Of this year, yes.

9 Q. Now, do you recall in that case that there was a
videotape
10 that showed a police officer using an unauthorized
11 evidence-collection technique in connection with one of
the
12 defendants, Peugeot -- with a Peugeot automobile
attributed to
13 one of the defendants?

14 MS. WILKINSON: Objection, your Honor.

15 THE COURT: Yes. What's the relevance of
this?
16 MR. TIGAR: To establish the witness'
knowledge of
17 proper evidence-collection techniques.

18 THE COURT: Well, I think you can ask that
without
19 getting into other cases.

20 BY MR. TIGAR:

21 Q. Have you had experience with evaluating whether or
not
22 evidence-collection techniques that are used by the
police
23 create a risk of contamination?

24 A. I think almost certainly, yes. I'm not sure I can
remember
25 a specific, but I feel I must have done.

1 Q. And in fact, the analysis that the -- the
procedures that

2 are used to collect evidence have been of great concern
in the

3 United Kingdom. Correct?

4 A. They are of great concern, yes.

5 Q. Because you have -- as a matter of fact, you have
written

6 an article in which you state that "it is of concern
that we

7 have safe convictions and safe acquittals"; correct?

8 A. Yes.

9 Q. Is that right?

10 A. Yes, it is.

11 Q. And a part of making sure that we have safe
convictions and

12 safe acquittals is that we do not overstate the
importance or

13 relevance of forensic testimony. Would you agree with
that?

14 A. Yes, I would.

15 Q. And in your article, you gave an example of how it
might be

16 possible to misinterpret forensic evidence. Do you
remember

17 that?

18 A. Could you remind me which article you're referring
to.

19 Q. This is an article -- did you write an article in
which you

to the 20 set out a case in which several people had had access
21 same storage area?
on 22 A. Is this the hypothetical area in the book chapter
23 explosion?
24 Q. The truck driver.
we hope 25 A. I have written -- co-authored a book chapter which

11678

Linda Jones - Cross

1 will be published at sometime on a book on forensic
science;
2 but the chapter I co-authored is on explosions. And I
3 formulated a hypothetical case as part of that book
chapter.
4 I'm not sure if that's what you're referring to.
5 Q. Well, did this book chapter involve a passenger and
a truck
6 driver?
7 A. I think I would need to refresh my memory on it;
but I'm
8 sure it does. I'm not absolutely sure the scenario I
created,
9 but it was an imaginary one.
10 Q. All right. Well, we'll find the article and then
we'll
11 come back to it.

12 A. Thank you. I'd appreciate that.

13 Q. Now, when you've -- when is the first time that you
became

14 interested in what's been identified here as
Government's

15 Exhibit 664 or Q507?

16 A. I saw Q507 during my first visit to Denver, which I
think

17 was about September time, 1996. But then I was only

18 concerned -- or I was only aware of its physical
damage. I

19 wasn't aware during that visit of any chemical
components that

20 had been analyzed from it.

21 Q. And did there come a time when you looked at the
evidence

22 recovery log that showed when and where it had been
recovered?

23 A. I've seen the FBI chain of custody log from the
laboratory.

24 I don't know -- I can't remember exactly what other
logs I've

25 seen. I have seen some because they're in my notes.

11679

Linda Jones - Cross

1 Q. I'm going to show you a page of what's been
introduced in

2 evidence as Defense Exhibit E89. Do you recall having
seen

3 that before?

I was

4 A. I've certainly seen it this week or last week when

5 sitting in court. I think I have seen it before, but I

6 couldn't swear absolutely to that.

evidence?

7 Q. Were you in court when this item was received in

8 A. Yes, I was.

number

9 Q. And you recall the discussion at that time that the

10 06 was missing?

11 A. I do.

Exhibit 664

12 Q. And the 06 is what would indicate Government's

13 or Q507; correct?

14 A. So I have learned over the last week, yes.

Defendant's

15 Q. I'm going to show you now what I have marked as

16 Exhibit E4 --

17 A. Thank you.

18 Q. -- and ask you if you can recognize that.

Honor.

19 MR. TIGAR: It's a page of her notes, your

20 MS. WILKINSON: Thank you.

at me.

21 Your Honor, he just flashed a piece of paper

22 All I want to do is take a look at it.

things, your

23 MR. TIGAR: They've had a list of these

24 Honor, but here.

witness 25 THE COURT: Well, she's entitled to what the

11680

Linda Jones - Cross

1 is being shown.

2 MR. TIGAR: Of course.

3 MS. WILKINSON: No objection, your Honor.

4 MR. TIGAR: Then I offer it.

to you 5 MS. WILKINSON: Not to it going into evidence,

6 showing it.

7 MR. TIGAR: All right.

8 THE WITNESS: Thank you.

9 BY MR. TIGAR:

10 Q. Your turn.

11 A. Thank you.

12 Q. Do you recognize that as material from your notes?

13 A. Yes, I do.

14 MR. TIGAR: We offer it, your Honor.

was just 15 MS. WILKINSON: I would object. I thought he

16 using it to refresh her recollection.

offering 17 THE COURT: Well, for what purpose are you

18 it?

19 BY MR. TIGAR:

20 Q. Did you use this item to help you determine where
Q507,

21 Government's 664, had been recovered?

22 A. No.

23 Q. For what purpose did you use it?

24 A. It showed me the position of some of the vehicles
in the

25 parking lot. It was a piece of paper that was provided
to me

11681

Linda Jones - Cross

1 together with other pieces of paper.

2 Q. Do you see that -- the "06" there?

3 A. Yes.

4 Q. Do you know who wrote that?

5 A. No.

6 Q. Was that on there when you received it?

7 A. Without checking my copy, I cannot say.

8 Q. Do you have your copy with you?

9 A. Not here in the witness box. I have it here in
Denver with

10 me.

11 Q. Is it in the court?

12 A. Yes.

13 MR. TIGAR: Your Honor, may she look at it for
14 comparison purposes?

15 THE COURT: Is it here in the room?

16 THE WITNESS: Yes, your Honor. It's in my
case down
17 in the corner somewhere.

18 THE COURT: Well, you may step down and
recover it.

19 THE WITNESS: Thank you, your Honor.

20 BY MR. TIGAR:

21 Q. Page 188.

22 A. 188. Thank you.

23 Sorry. I can't read my own writing.

24 Yes. I'm sorry. It's the photocopy. I do
have it,
25 and "06" is present on my copy.

11682

Linda Jones - Cross

1 Q. Is what I'm showing you that has been marked as
Defendant's

2 Exhibit E4 a true and accurate copy of what was
furnished to

3 you by the FBI?

4 A. As I said, it hasn't copied -- yours hasn't --
hasn't

5 copied terribly well. Some pieces haven't come out on
it; but

6 yes, it looks -- yeah.

7 Q. And does this notation at the top indicate that
that's out

8 of your files; is that correct?

9 A. That's my handwriting, yes.

10 MR. TIGAR: We offer E4, your Honor.

11 MS. WILKINSON: Your Honor, as long as we put
another

12 copy in for Ms. Jones showing all the markings. If I

13 understand, her testimony is not all the markings came
out.

14 But as long as we can do that after court, I have no
objection.

15 MR. TIGAR: Yes. This is marked "best copy
16 available."

17 THE COURT: All right. Then another copy can
be made

18 with your permission.

19 MR. TIGAR: Of course.

20 THE COURT: We'll receive E4.

21 BY MR. TIGAR:

22 Q. I'm now going to place what has been received as
23 Defendant's Exhibit E4 on the overhead. I'm going to
zero in.

24 You see the 06 here?

25 A. Yes.

Linda Jones - Cross

1 Q. Now, was that on there when you received this
document from

2 the Federal Bureau of Investigation?

3 A. Yes.

4 Q. And would you agree with me that the "06" is not
present on

5 Defendant's Exhibit E89, the document that the FBI
agents were

6 here and testified about the other day?

7 A. What you're showing me on the screen now does not
include

8 "06."

9 Q. And you heard the testimony of the agents
concerning that;

10 correct?

11 A. Yes.

12 Q. Now, in terms of the procedures that are followed
in the

13 United Kingdom, it is desirable, is it not, to record
the

14 location of an item of evidence that is recovered at
the time

15 that it is recovered and on the evidence recovery log
that is

16 then being prepared?

17 A. Ideally, yes, at the time, or very soon afterwards.

18 Q. And you first received E4 when?

19 A. I'm sorry. Could you remind me what E4 is.

20 Q. I'm sorry. It's that page from your notes.

21 A. With the "06" on it?

22 Q. Yes, with the "06."

23 A. That would have been after the first report that I
did,

24 so -- I can't remember the exact date, but it would be
after

25 September, 1996.

11684

Linda Jones - Cross

1 Q. All right. Because you did two reports; correct?

2 A. I did, yes.

3 Q. And one did not take account of Q507 and the second
one

4 did; correct?

5 A. The first one didn't take account of the chemical
analysis

6 of Q507; that's right.

7 Q. And the second one did?

8 A. It did, yes.

9 Q. So you don't know, do you, who put "06" on there or
when

10 they put it on you -- on there. Correct?

11 A. That's correct. I don't know.

12 Q. Now, is it also desirable in terms of the
procedures

evidence 13 followed in the United Kingdom to photograph items of

14 at a scene before they are moved?

15 A. In a -- in ideal circumstances, that's certainly
preferable

16 but not essential.

17 Q. And you so heard the testimony that as to some
items they

18 were photographed before they were moved and the agent
19 testified as to some items they were not?

20 A. Yes, and I think that's generally the same at home.

21 Circumstances dictate.

22 Q. But at home -- you mean in the United Kingdom?

23 A. Yes, in England.

24 Q. It is certainly the case that officers are supposed
to

25 document in some way exactly where something was found,
whether

11685

Linda Jones - Cross

1 they do it by a photograph or marking on a grid or by a

2 videotape or some way; correct?

3 A. There will be some record made. Not always
immediately

4 when the item is located but as soon as practical
afterwards

5 and while their memories are still fresh.

6 Q. And you heard the testimony of the agents about who
7 remembered who took the photograph and all the rest of
that;

8 correct?

9 A. Yes.

10 Q. Now, with respect to collection of evidence --

11 A. Yes.

12 Q. -- you're quite familiar, are you, with how you
test for
13 these organic explosives; is that right?

14 A. Yes.

15 Q. And in the United Kingdom, if you intend to test
for

16 organic explosives, would you use ordinary polyethylene
bags to
17 collect evidence at a bombing scene?

18 A. Again, the polyethylene bags aren't ideal, but
they're
19 often used.

20 Q. And why aren't they ideal?

21 A. Some high-performance explosives, particularly the
liquid
22 ones such as nitroglycerin, are volatile and will seep
through
23 polyethylene bags.

24 Q. And nitroglycerin is one ingredient of ammonium-
nitrate-
25 based dynamites; correct?

1 A. Some dynamites, yes.

2 Q. So if one were concerned to try to identify the
presence of

3 ammonium-nitrate-based dynamites, one would not use

4 polyethylene bags; correct?

5 A. That wouldn't be ideal, but again circumstances
dictate. A

6 polyethylene bag is better than no bag.

7 Q. Understood. But in the United Kingdom, what kind
of bags

8 do you recommend?

9 A. For explosive-residue analysis, wherever practical,
we

10 recommend a different type of plastic bag, which is a
nylon

11 bag.

12 Q. A nylon bag?

13 A. Yes.

14 Q. Now, would you also agree that chain of custody of
the

15 evidence is very important?

16 A. Yes.

17 Q. And it is important to identify who recovered the
item?

18 A. Yes.

19 Q. To whom they gave it?

20 A. Yes.
21 Q. And who transported it to the Evidence Control
Center?
22 A. Yes.
23 Q. And you heard the evidence with respect to that in
this
24 case; correct?
25 A. Yes.

11687

Linda Jones - Cross

1 Q. Is that right?
2 A. Yes, I did.
3 Q. Now, in this scene, you've told us about a number
of
4 findings that you were able to make based on analyses
of
5 different things that were found at the scene; correct?
6 A. Yes.
7 Q. For instance, you told us about parts of the Ryder
truck.
8 Do you recall that?
9 A. Yes.
10 Q. Now, the piece -- this is Government's 654. That
is a
11 piece of the handle on the cargo box?
12 A. Yeah. It's -- the flat piece with the damage --
that's --

to the 13 would have been the part that would have been affixed
would 14 back of the truck, almost as support for the lever that
15 operate --

we have 16 Q. Is it your understanding that this is located -- do
17 the other sample?

18 MS. WILKINSON: It's right here. 655.

19 BY MR. TIGAR:

20 Q. 655. So 654 -- this flat metal piece with the
pitting and 21 cratering would have gone on the outside. Correct?

22 A. It would, yes.

23 Q. Okay. And it's your testimony that the device --

24 MR. TIGAR: Excuse me, sir.

25 BY MR. TIGAR:

11688

Linda Jones - Cross

and 1 Q. -- exploded with sufficient force to create pitting
2 cratering through the fiberglass-reinforced plywood and
onto 3 this metal surface. Is that right?

4 A. Yes, it is.

correct? 5 Q. Now, this is located at the rear of the cargo box;

6 A. Yes.

7 Q. And what is your conclusion as to where the device
was

8 located in the cargo box?

9 A. I don't know precisely, but I think it would have
been

10 likely to have been towards the cab end of the box.

11 Q. Now, you told us that the rear axle, which the
jurors have

12 seen but we did not --

13 A. Yes.

14 Q. -- left around here, was found here in front of
the

15 Regency Tower. Correct?

16 A. That is right.

17 Q. You can't see it, but where I'm pointing?

18 A. Yes.

19 Q. And that the front axle was found about where?

20 A. I think -- keep going.

21 Q. Keep going?

22 A. Around there, I think.

23 Q. Around there?

24 A. I think so generally.

25 Q. Now, that's consistent with something having blown
the rear

is 1 axle backwards and the front axle forwards if the truck

2 pointing in an easterly direction; correct?

3 A. Yes.

charge was 4 Q. And does that suggest to that you the explosive

backward 5 placed forward of the rear axle so as to exert that

6 pushing force?

7 A. Yes.

cratering that 8 Q. So it is your testimony that the pitting and

explosive 9 we see here was made -- was about how far from the

10 device that was in the Ryder truck?

explosive 11 A. I don't know how -- I don't know the volume the

that 12 would have occupied, but that would have been beyond --

Is 13 latch would have been beyond the rear axle. I'm sorry.

14 that what you asked?

and how 15 Q. Yes. By looking at a diagram of the Ryder truck

16 it's built, we could determine that distance; correct?

17 A. Yes, we could.

Paul 18 Q. Okay. Now, are you acquainted with a man named

19 Rydlund?

met him. 20 A. No. I know the gentleman's name, but I've never

ammonium 21 Q. Do you regard him as authoritative in the field of

22 nitrate/fuel oil explosives?

23 A. From what I've heard, I certainly do.

24 Q. Have you read his testimony in this case?

25 A. Not in this trial.

11690

Linda Jones - Cross

1 Q. You read it in another trial?

2 A. Yes.

as to 3 Q. All right. Now, have you -- do you have an opinion

exploded 4 whether the device that blew up the Murrah Building

5 efficiently or not?

6 A. Relatively efficiently, yes, I think it did.

efficiently 7 Q. And do you have an opinion as to whether an

plastic 8 detonating ammonium-nitrate-based device contained in

9 barrels would upon explosion consume the barrels?

remain. 10 A. It could do, but equally some fragments could

11 Q. And that is your opinion; correct?

the 12 A. It is my opinion, yes, based on some experience of

13 behavior of plastics in explosions.

14 Q. Now, you said that you had been to or examined
between 550

15 and 600 crime scenes; correct?

16 A. Not crime scenes. Forensic explosives cases.

17 Q. And how many of those involved ammonium nitrate?

18 A. Ammonium-nitrate-based explosives, perhaps 20 -- I
was

19 going to say about 20 to 30. There would be 20 to 30

20 post-explosions or recoveries of bombs, but there would
have

21 been many more related to residue analysis.

22 Q. And when you say "residue analysis," what do you
mean?

23 A. Looking for -- if I could explain a little bit.

24 Q. Of course.

25 A. When -- for example, if there is a large explosion
of a

11691

Linda Jones - Cross

1 truck bomb in England, then the -- the crime-scene case
would

2 be -- would count as one, one case. But also
associated with

3 that, if people are arrested, there might be residue
analysis

4 carried out from various addresses or vehicles or so
on, and

would say 5 they will count as cases in their own right. So I
of 6 that probably 20 to 30 of the explosions or recoveries
7 materials but many more --

8 Q. Many more cases.

9 A. Yes.

case. Is 10 Q. So one explosion event can lead to more than one
11 that right?

12 A. Yes.

were 13 Q. Okay. Now, when you were first retained here, you
correct? 14 concerned about what the weather conditions were;

15 A. Yes.

16 Q. And what were you told?

17 A. I was told that -- I asked a series of questions in
18 relation to Q507 recovery and analysis.

19 Q. Yes.

there was no 20 A. I was told that it rained on April 19 and then

until 21 more rain until after April 21. I think that's -- yes,
22 after April 21.

into the 23 Q. And were you told that the crystals were embedded
24 plywood?

25 A. Yes, I was.

11692

Linda Jones - Cross

1 Q. Were you told that there was a glaze of crystals in
the

2 plywood?

3 A. I saw that in Mr. Burmeister's notes; that he
described it

4 as a glaze.

5 Q. When did you first see the notes?

6 A. Between September and December, 1996.

7 Q. And did you regard what you had seen as trace
evidence;

8 that is, the Q507?

9 A. No.

10 Q. Excuse me. Do you remember testifying in a
previous trial

11 that "I've reviewed Steven Burmeister's finding with
respect to

12 Q507 and some other of the trace evidence"?

13 A. Yes.

14 Q. And did you mean by that to distinguish the trace
evidence

15 from Q507, or were you regarding Q507 as a part of the
trace

16 evidence?

17 A. It wasn't well-worded, but I would regard Q507 not
as trace

wasn't 18 evidence, but it was a low level, rather than -- it
"bulk" is 19 pounds of material. I would regard it as -- I think
regard as 20 too strong a word, but anything visible, I wouldn't
350 21 trace. But I reviewed, I think, the results from about
22 samples.
23 Q. Yes. Now, you say you did review. You reviewed
about 350 24 samples. Is that right?
25 A. Or the results from about 350.

11693

Linda Jones - Cross

1 Q. Now, have -- you have never found -- in all the
2 ammonium-nitrate-based explosive scenes in which you
have ever 3 investigated, you've never found crystals. Is that
right? 4
4 A. Only one instance, but I'm afraid that bomb didn't
detonate 5
5 efficiently, so I got pounds of it, but not -- I
haven't found 6
6 crystals in the Q507 way.
7 Q. In fact, you've previously testified, "I haven't
found 8
8 crystals." Correct?
9 A. Not in the Q507 way; that's correct.

10 Q. For a device that detonated?
11 A. Exactly.
12 Q. And this device clearly detonated?
13 A. This device detonated.
14 Q. Is there any scientific literature that reflects
that
15 anybody else has ever found crystals?
16 A. Not so far as I'm aware.
17 Q. This is one of these instances in which "anything
is
18 possible"?
19 A. Within the context of the crime scene, yes.
20 Q. In fact, you've testified previously: "Anything is
21 possible"; right?
22 A. I might well have done.
23 Q. And so do you know of anybody who has presented a
paper,
24 any scientific literature that says "I found crystals"?
25 A. Not in this sort of context, no. I can't say --
not so far

11694

Linda Jones - Cross

1 as I'm aware.
2 Q. One of the elements of science is repeatability;
correct?
3 A. In chemical analyses, yes.

stuff 4 Q. That is, where -- when we put diphen -- what's that
things 5 called? That substance -- diphenylamine -- that makes
6 turn blue?

pronounced 7 A. I call it diphenylamine, but that's not how it's
8 here.

time you 9 Q. All right. Well, whatever that stuff is, every
blue? 10 put it on an oxidizer, the stuff turns -- it turns

11 A. On a range of oxidizers, yes.

It's 12 Q. And that's called -- that's repeatability; right?
-- 13 going to happen every time that it contacts an oxidizer
14 that's what's going to happen; correct?

same 15 A. If you do exactly the same thing with exactly the
16 materials and same amounts, yes.

scientific 17 Q. That's right. And that is the hallmark of the
results again 18 method -- correct -- is that you can get the same
things, 19 if you do the same experiment? That's how you verify
20 isn't it?

laboratory 21 A. Not in all scientific work, no. But with
22 testing as you describe with chemical analyses, you

should be

23 able to devise experiments to illustrate the
repeatability.

24 Q. But we don't have anything in the literature about
crystals

25 for exploded devices, do we?

11695

Linda Jones - Cross

1 A. An explosion is a random event. If we do exactly
the same
2 explosion a number of times, we will get different
results.

3 Q. Now, you also looked at pieces of plastic, did you
not?

4 A. Yes.

5 Q. Now, can you tell me -- let us assume
hypothetically that

6 the device -- we're talking about a device in the
4,000-pound
7 range.

8 A. It would encompass 4,000 pounds, yes.

9 Q. I understand that's your estimate, but I'm going to
ask you
10 a hypothetical question.

11 A. Yes.

12 Q. I'm going to ask you to imagine that the device is
in

13 plastic barrels.

14 A. Yes.

15 Q. That each barrel has ammonium nitrate and fuel oil
in it.

16 A. Yes.

17 Q. Now, I'm going to ask you when you -- if you use a
18 barrel -- if the bomber uses a barrel --

19 A. Yes.

20 Q. -- with ammonium nitrate in it and pours the fuel
oil in,
21 the fuel oil will make contact with all the prills;
correct?

22 A. It depends how much you put in, but it will be
absorbed on
23 the prills it comes into contact with as it's seeping
through
24 the barrel.

25 Q. In the 6 percent range. If you do it in the 6
percent

11696

Linda Jones - Cross

1 range and use fuel oil, it would all come in contact
with the
2 prills. Correct?

3 A. I can't say every single prill; but in general,
yes, that's
4 the idea.

5 Q. Now, ammonium nitrate and fuel oil with a 6 percent
mixture

6 of fuel oil is not necessarily cap-sensitive, is it?

7 A. Not necessarily, no.

8 Q. And by not "necessarily cap-sensitive," that means
if I put

9 a blasting cap in the middle of that barrel and bang it
off,

10 maybe it will go and maybe it won't?

11 A. That's right. It wouldn't be reliable.

12 Q. So to make this reliable, our bomber would have to
put

13 something else in there as a booster. Correct?

14 A. That would be sensible, yes.

15 Q. So let's assume that a booster was used, some
commercial

16 ammonium nitrate product.

17 A. Yes.

18 Q. And then that commercial product would be cap-
sensitive;

19 correct?

20 A. That would be -- you would select a cap-sensitive
booster.

21 Q. And for -- now, often when testifying in the United
22 Kingdom, you try to put yourself in the position of the
person

23 that made the device; correct?

24 A. Sometimes I do, yes.

25 Q. Well, you did it, for instance, in the Gannon case;
right?

11697

Linda Jones - Cross

1 A. I might have done.

other

2 Q. And I only mention that because I think we saw each
3 there.

4 A. Did we?

5 Q. Excuse me. I'm sorry.

ask you

6 Is it unfair to you -- is it unfair to you to
7 to imagine yourself constructing this device?

8 A. No.

9 Q. All right. I'm sorry.

10 A. No, I'm sorry, too.

11 Q. Now, the booster is then cap-sensitive; correct?

12 A. Yes.

13 Q. Now, if our bomber used Primadet --

14 A. Yes.

15 Q. You're familiar with what Primadet is; right?

yes.

16 A. I'm familiar with the -- the shock-tube principle,

tube?

17 Q. And you know that Primadet is a brand of shock

18 A. Uh-huh. Yes.

drink of

19 Q. And in this case -- please go ahead and have a
20 water.

21 A. I'm sorry. I'm trying to compose myself.
22 Q. In this case, you did examine pictures of Primadet.
Is
23 that right?
24 A. No.
25 Q. Oh, did you examine -- did you find out about any
Primadet

11698

Linda Jones - Cross

1 that was recovered anyplace in this case?
2 A. Not until I sat in court last week.
3 Q. And have you -- are you familiar with the concept
of
4 Primadet being or the shock-tube things having a very
small
5 quantity of explosive on the inside of a plastic tube?
6 A. Yes, I am.
7 Q. And are you familiar with the manufacturer's
contention
8 that the shock tube survives the passage of the -- the
fire
9 through the tube?
10 A. No.
11 Q. You've not read any product literature to that
effect?
12 A. I don't remember that, no.
13 Q. Now, the plastic in which shock tube is made is
what kind?

14 A polyethylene, or --
15 A. I don't know.
16 Q. Don't know. Now -- all right. Suppose our
hypothetical
17 bomb, the Primadet -- or if a shock tube was used, that
would
18 be placed in general on the outside of the barrels?
19 A. It could be, or it could be -- it could be outside,
or
20 leading into the barrels.
21 Q. Now, if -- The cap, of course, would have to be
down inside
22 the barrel; correct?
23 A. Yes.
24 Q. And then the other part might or might not be led
out to be
25 connected. Correct?

11699

Linda Jones - Cross

1 A. Yes.
2 Q. In the case we're putting here, this hypothetical
case,
3 you'd have to interconnect the barrels; correct?
4 A. You wouldn't have to, but that would enhance the
5 reliability.
6 Q. All right. And again, we see that this was an
efficient

7 device; correct?

8 A. Yes.

9 Q. Now, after -- and you did not -- there was no
evidence in

10 this case of a time delay; correct?

11 A. Not from the --

12 Q. Or clock?

13 A. That's right. Not from the items that I examined
or became

14 aware of. I didn't see any evidence of a timer.

15 Q. Now, does that lead you -- so does that suggest to
you that

16 this was ignited by some sort of time-delay fuse?

17 A. It would suggest that, but it wouldn't rule out the
use of

18 a timer.

19 Q. Did you review video taken from the Regency Tower
video

20 camera shortly before 9:02 in the morning on the 19th?

21 A. I don't know what time it was. I saw a short
sequence of

22 video footage from the Regency Tower. I wasn't aware
-- I

23 don't know what time in the morning it was.

24 Q. Did you see a video of a Ryder truck coming into
view,

25 pausing and then moving on?

11700

Linda Jones - Cross

1 A. I recall seeing a video of a truck passing the
Regency
2 Tower filmed apparently from inside the Regency Tower.
3 Q. Do you recall whether or not the truck paused?
4 A. I don't remember.
5 Q. So that didn't play -- whether it did or not, that
did not
6 play any part in your analysis; is that correct?
7 A. No. I think I've only seen that relatively
recently,
8 either just before the first -- I don't know.
Certainly after
9 I wrote my reports.
10 Q. Now, if no timing device was used --
11 A. Yes.
12 Q. All right -- then the most likely method of
ignition is
13 some sort of safety fuse that burns at a prescribed
rate;
14 correct?
15 A. That would be easiest -- not the safest, but the
easiest
16 method, yes.
17 Q. And once that fuse is lit, the bomber had better
get out of
18 the way; correct?
19 A. The bomber certainly should make their escape
quickly.

20 Q. If the bomber wants to survive?

21 A. Exactly, yes.

22 Q. Now, in our hypothetical case, is it your testimony
that

23 the plastic barrels, if the device were efficiently

24 constructed -- that pieces of them might survive?

25 A. They could do, yes.

11701

Linda Jones - Cross

1 Q. Now, again, is there any literature on that
subject?

2 A. I don't know.

3 Q. Now, once this thing goes off, it exerts an
enormous

4 outward force in all directions; correct?

5 A. Yes.

6 Q. And for all practical purposes, that force is equal
360

7 degrees around; that is, in all directions. Correct?

8 A. It tries to be.

9 Q. Now, that could be influenced by the positioning
of, in our

10 hypothetical, some barrels. Correct? They could be
put in a

11 particular shape?

12 A. It's influenced by a number of factors, including
the size

13 and the shape of the bomb, how it's packaged, how it's
14 contained. There is a dozen or a couple of dozen
factors that
15 will influence that, yes.

16 Q. 30 centimeters or approximately 1 foot from the
center of
17 initiation in any given barrel in our hypothetical case
--

18 A. Yes.

19 Q. -- what is the temperature that one can expect to
see a few
20 minutes -- a few milliseconds after explosion -- after
21 initiation?

22 A. I don't know. Again, it would depend on the
explosive.

23 Q. I've asked you to assume ammonium nitrate/fuel oil
boosted
24 with an ammonium-nitrate-based dynamite and ignited
with a cap
25 integral to a shock tube.

11702

Linda Jones - Cross

1 A. If you're asking me a specific temperature, then my
answer
2 is I don't know.

3 Q. Can you give me a range of temperatures?

4 A. It will be likely to be thousands of degrees
Celsius.

5 Q. And thousands of degrees Celsius is certainly
enough to
6 create the toffee-apple effect on polymers?
7 A. It can be, yes.
8 Q. And what is the toffee-apple effect?
9 A. It's a melting of some of the pieces of plastic so
that you
10 get little globules of plastic formed --
11 Q. And --
12 A. -- with some types of plastic.
13 Q. I understand. And whether you get the little
globules
14 depends on what kind of plastic, what the melt point
is, and so
15 on?
16 A. Some of the factors, yes.
17 Q. Now, if the pieces of plastic that were -- that
contained
18 our hypothetical device survived, would you also expect
other
19 plastic items that had also been used in constructing
the
20 device to survive?
21 A. It would depend what they were and where they were,
so they
22 might or might not survive.
23 Q. If the plastic was outside the barrel containers,
would it
24 be more, or less likely to survive than the actual
containers

25 themselves?

11703

Linda Jones - Cross

1 A. Again, it would depend on the type and
configuration of the

2 plastic.

3 Q. That is to say, its melt point and its other
4 characteristics. Is that correct?

5 A. Its thickness -- for example, if there was a
plastic bag

6 outside the barrel.

7 Q. Now -- I'm sorry. Go ahead.

8 A. I was going to say if there was a plastic bag, I
wouldn't

9 expect the plastic bag to survive.

10 Q. Because it's much thinner than the barrel material
and made

11 of a different substance; correct?

12 A. It's much more flimsy. It would get shredded and
blown --

13 be likely into pieces that would be unrecognizable.

14 Q. Now, how many pieces of plastic were you shown?

15 A. I can't remember as a number. I saw a number of
bags of

16 plastics fragments.

17 Q. Now, you were asked particularly to look at just a
few;

18 correct?
19 A. A few fragments, or a few bagfuls? I'm sorry. I
wasn't
20 asked --
21 Q. How many Q numbers were you asked to look at in
terms of
22 plastics?
23 A. I can't remember how many I was asked to look at,
but I
24 would guess I looked at perhaps 10 or so bags of
fragments.
25 Q. And with respect to any one of those fragments, any
one

11704

Linda Jones - Cross

1 that you looked at, were you able to tell how close
they had
2 been to an explosive device?
3 A. Only with some of them to say they were close.
Others
4 weren't explosive --
5 Q. Go ahead. I'm sorry.
6 A. Other fragments I looked at weren't explosively
damaged,
7 they were just broken.
8 Q. And when you say "close," how -- are you able to
say within
9 a certain number of meters how close?

10 A. No.

11 Q. And -- well, are you able to give us a minimum
closeness?

12 A. No.

13 Q. So it could be 20 meters?

14 A. No. I think that's too far away.

15 Q. All right.

16 A. I think the plastics fragments I described as being
close
to get a
have
the case.
would
in this
building --
with
and

17 were in or near the Ryder truck. And I'm just trying
18 feel for what I mean by "near." I think they would
19 been -- if we imagine -- and I'm not saying this was
20 If we imagine that the plastic wasn't in the truck, I
21 have put it in terms of a distance but not necessarily
22 position -- in a distance between the truck and the
23 the Murrah Building.

24 Q. So that what you saw on the plastic is consistent
25 something being outside the truck but between the truck

11705

Linda Jones - Cross

1 something else; correct?

2 A. I think if --

3 Q. The plastic you found was recovered from a -- away
from the

4 Murrah Building -- the plastic you looked at; correct?

5 A. I'm talking about where it was originally, yes.

6 Q. Now, is what you saw consistent with the plastic
having

7 been in this parking lot just across the street from
the event?

8 A. I'm looking -- I'm trying to gauge the distance
between the

9 crater and the building and the crater and into the
parking

10 lot, so I would think sort of a radius around the truck
but not

11 extending into the building.

12 Q. All right. What -- how large a radius are we
talking?

13 A. I can't put a figure on it.

14 Q. Were you asked to look at any plastic fragments
that had

15 been recovered inside the Murrah Building?

16 A. I can't remember if some of them came from inside
the

17 Murrah Building.

18 Q. Were you asked to look at a piece of blue PVC
plastic in

19 particular that had been recovered -- and told had been
20 recovered from one of the victims?

21 A. Not that I recall. I saw a number of colored
rather than
22 the -- the white or translucent plastic. I saw a
number of
23 colored fragments, but I don't remember a fragment that
I was
24 told had been recovered from a victim.
25 Q. Now, a little while ago, I was asking you about an
article.

11706

Linda Jones - Cross

1 And I don't want to offer this, but I just want to look
at it.
2 Is that the chapter you're referring to?
3 A. Yes, it is.
4 Q. And you co-authored that with Mr. Marshall?
5 A. With Dr. Marshall.
6 Q. Dr. Marshall.
7 Now, in that, do you warn us against the over
--
8 making too many conclusions from forensic evidence?
9 A. In this imaginary case that I -- that I put
together, the
10 moral of the tale, if you will, is that you've got to
wait till
11 you get to the end of your analysis before you come to
your
12 considered conclusion.

13 Q. Right. And that was a hypothetical in which five
people
14 had rented a lockup garage and each of them had a key;
correct?
15 A. If you say so. There were a number of people.
16 Q. Page 23.
17 A. Thank you.
18 Yes.
19 Q. All right?
20 A. Yes, there were five people.
21 Q. What's a lockup garage? A storage shed?
22 A. It could be, yes.
23 Q. All right.
24 A. But a lockup garage is usually one you put a car
in, but a
25 storage shed would be fine.

11707

Linda Jones - Cross

1 Q. And there was forensic evidence consistent with the
guilt
2 of two individuals but one was not guilty and the other
was;
3 correct?
4 A. Well, that was what my imaginary court decided.
But there
5 was evidence that could suggest an involvement and an
illegal

6 involvement by one or more people.

7 Q. And so what you're telling us is that it's
important to go

8 beyond -- it's important not to overstate the value of
forensic

9 evidence; correct?

10 A. It's important to know the limitations of what
you're

11 finding.

12 Q. Now, specifically with respect to your findings
here, are

13 you able to tell us what the main charge was?

14 A. Not specifically, no.

15 Q. All right. Is it your view that it contained
ammonium

16 nitrate?

17 A. Yes.

18 Q. Are you able to tell us whether it was a commercial
19 ammonium nitrate, or a homemade or improvised one?

20 A. I don't know that.

21 Q. Are you able to tell us whether it contained fuel
oil, or

22 not?

23 A. I don't know that.

24 Q. Are you able to tell us whether it contained
nitromethane,

25 or not?

11708

Linda Jones - Cross

1 A. I don't know. Sorry. I don't know that.

2 Q. And how many products out there in the explosives
field do

3 contain ammonium nitrate?

4 A. I can't put a specific number on it, but ammonium
nitrate

5 is used in a range of manufactured explosives
formulations.

6 Q. Now, is it your opinion that a booster was
employed?

7 A. I don't know that, but my experience tells me that
was most

8 likely.

9 Q. Well, the reason -- that is, if ammonium nitrate
and fuel

10 oil were used, that's not cap-sensitive -- correct --

11 necessarily?

12 A. Not as a loose fill in, for example, a barrel.
There are

13 ways that it could be -- there are ways that the
ammonium

14 nitrate/fuel oil could be improvised into a booster.

15 Q. By adding some other things; is that right?

16 A. Or the way it's packaged.

17 Q. Now, are you able to tell us whether or not a
product

18 called Tovex was used?

19 A. I can't know that.

called 20 Q. Are you able to tell us whether or not a product

21 Kinepack was used?

22 A. I can't know that.

explosive was 23 Q. Are you able to tell us whether any binary

24 used?

25 A. I cannot know that.

11709

Linda Jones - Cross

nonelectric 1 Q. Are you able to tell us whether an electric or

2 blasting cap was used?

3 A. No.

not any 4 Q. And you're not able to tell us for sure whether or

5 timing device was used; correct?

don't 6 A. I think some sort of timing device was used, but I

7 know that it was an electrical timer.

the 8 Q. That's what I'm saying; that is to say, the -- if

9 bomber survived --

10 A. Yes.

device? 11 Q. -- there would have to be some sort of timing

12 A. There would have to be some sort of time delay

between the

13 bomber leaving the truck and the bomb exploding.

14 Q. And you're not able to tell us whether that time
delay was

15 the result of some time-sensitive or timed safety fuse
or from

16 some other type device; correct?

17 A. That's correct. I cannot know that.

18 Q. And you also -- however, since no actual clock-type
device

19 was found --

20 A. Yes.

21 Q. -- it's your conclusion it's more likely it was not
one of

22 those mechanical clock-type devices; is that right?

23 A. It could easily have been a non-clock device,
because again

24 no evidence of an electrical circuit so far as I'm
aware were

25 recovered.

11710

Linda Jones - Cross

1 Q. Now, you showed us some pictures of some
automobiles that

2 were in the parking lot. Correct?

3 A. Yes.

4 Q. And you said that what you saw was consistent with
them

5 having caught on fire. I'm going to put up on the
screen
6 Government's Exhibit 851. And that is -- those are
some
7 automobiles -- let me zoom out here.
8 A. That's better. Thank you.
9 Q. There you are. Those are burned; correct?
10 A. Yes.
11 Q. And that's consistent with the gas tanks having
exploded;
12 correct?
13 A. Not necessarily.
14 Q. Now --
15 A. But it could -- it could have been caused by the
gas tanks
16 rupturing, yes.
17 Q. Well, you saw -- if we look at Government's 854, we
can see
18 some burnt-out areas in here -- correct -- where my
finger is
19 pointing?
20 A. Yes.
21 Q. And then some burnt-out -- can you see any burnt-
out
22 automobiles in this area here?
23 A. Not so much from this photograph, but I know some
of those
24 vehicles were burnt from other photographs.
25 Q. And looking at Government's Exhibit 852, we can see

these

11711

Linda Jones - Cross

on top 1 automobiles. Some are flipped because the wheels are

2 and burned?

3 A. Yes.

4 Q. Then there is a wheel just --

5 A. Yes, I've got them.

6 Q. See, that's a wheel.

7 A. Yes.

8 Q. And that either was flipped, or it could be an

9 underneath-the-car-type spare tire; correct?

10 A. Yes, it could.

completely 11 Q. Now, do you notice here that the tires are

12 burned off these wheels?

13 A. Yes.

event 14 Q. Now, what is that consistent with in terms of the

on your 15 that we're seeing here? That is, do you have -- based

16 experience of looking at these scenes, I'd like you to

photograph -- 17 interpret -- and I'll zoom out or give you the

results of 18 Can you interpret for the jury what we're seeing the

of 19 here? Are we seeing the results of the first blast, or
20 subsequent fires, or what? What are we looking at?
21 A. I think it's a combination of both.
22 Q. Tell us about that.
23 A. I think a lot of the damage to the body work of the
they've 24 vehicles has been caused by the blast, the fact that
25 tumbled and flipped and the crumpling and damage to
them.

11712

Linda Jones - Cross

have 1 The -- they have also been fire-damaged. That could
2 resulted as a secondary effect from the blast hitting
them;
3 that the blast wave which -- all the time it's moving
away from
heating up. 4 the seat of the explosion, the blast wave will be
5 So it could be that the fuel tanks have ruptured or set
off an
6 electrical fault in the vehicles or created a spot fire
in the
7 upholstery.
8 Q. Now, you say first it could be from the blast wave.
As
9 pressure moves out from the center --

10 A. Yes.

11 Q. -- as the blast moves out from the center of this
-- and we

12 see the center here, the yellow crater that's right
here in

13 front of the Murrah Building --

14 A. Yes.

15 Q. -- is it getting -- is there a fireball-type effect
that's

16 getting hotter as it moves out?

17 A. There will be a fireball effect, yes, but the
fireball is

18 moving very, very quickly. So some items won't
actually catch

19 fire as the fireball passes over them. For example,
like if

20 you run your finger through a flame, a candle flame
very

21 quickly, it doesn't burn. If you linger in the flame,
it

22 hurts.

23 Q. Yes.

24 A. So the blast wave would be similar to that.

25 Q. So some of this could be the result of that, but
you say

11713

Linda Jones - Cross

1 that it would have passed very quickly; so is it your

2 conclusion that some of this damage has to be the
result of

3 some of these things catching fire for some reason?

4 A. Oh, yes, I think certainly.

5 Q. Now, when an automobile catches fire -- have you
had

6 experience with automobiles catching fire and the
gasoline in

7 the tank igniting?

8 A. Yes.

9 Q. And based on your experience, is that consistent
with this,

10 with what you're seeing here?

11 A. It could be, yes. Yes. It isn't --

12 Q. For instance, the charring?

13 A. I'm sorry. I was going to say it isn't
inconsistent with

14 it.

15 Q. Okay. And the charring that we see here in the end
of this

16 vehicle: Is that -- and you see the gas-tank lid is
blown off

17 there?

18 A. I'm sorry. Could you point again for me.

19 Q. Right there where my finger is. I have to zoom out
again.

20 I keep doing this wrong.

21 A. Yes.

22 Q. Do you see that's blown off, the gas-tank lid? Do
you see

23 that?

24 A. It appears to be. It's not there, so I assume it's
been

25 blown off, yes.

11714

Linda Jones - Cross

1 Q. So that's consistent with the car having blown up
--

2 correct -- or the gasoline tank having ignited,
exploded?

3 A. If we assume that there was no cap on it to start
with,

4 then when the residual gas in the tank expanded -- then
it

5 would have popped out, or the pressure would have been
released

6 through that hole.

7 Q. Now, when a gasoline tank of an automobile
explodes, does

8 that create a fireball?

9 A. It can do.

10 Q. And how hot does that get?

11 A. I don't know, but hot. I mean --

12 Q. Hot enough to burn plastic; right?

13 A. Oh, certainly, yes.

14 Q. Hot enough to burn the tires off the vehicles.
Correct?

15 A. Yes. What is interesting is that we've not only
lost the
16 rubber from the tires but also the -- the metal
reinforcing
17 that's inside the tire.

18 Q. Oh. That is to say, assuming these things are
steel-belted
19 radial tires --

20 A. Yes. I'm sorry. I couldn't remember the phrase.

21 Q. -- we're not seeing the steel fabric that's inside
there;
22 right?

23 A. I can't see it in these photographs. It might have
got
24 churned up within the wreckage.

25 Q. Now, when the fire people come to put these things
out,

11715

Linda Jones - Cross

1 they use all sorts of things; correct? Have you been
at scenes
2 where the firefighters are putting on all sorts of
things to
3 try to put fires out?

4 A. I know they use a range of things, but that phase
is
5 usually over by the time I get there.

6 Q. Now, in your evaluation of the forensic evidence
that was

7 found in the parking lot, did you attach any
significance to

8 the fires that had taken place in the parking lot?

9 A. No, except that it was consistent with a bomb
exploding.

10 The fire damage was relatively random throughout the
parking

11 lot.

12 Q. Now, in looking at a crime scene that you would be
13 evaluating --

14 A. Yes.

15 Q. -- you're always -- you have to pay attention to
things

16 that normally occur in the environment. Correct?

17 A. Yes.

18 Q. For instance, you never test for sawdust, or you
seldom

19 test for sawdust, do you?

20 A. Not in a post-explosion scene.

21 Q. Right.

22 A. But when we analyze some explosives, we do.

23 Q. I'm talking about a post-explosion scene like this.
You

24 don't analyze sawdust; right?

25 A. I would say not. If we think of a crime scene of
this

Linda Jones - Cross

1 scale, we wouldn't analyze for sawdust.

you

2 Q. Right. And you've so testified in the past. Do

3 recall?

4 A. If you say so. I wouldn't disagree with that.

meal;

5 Q. All right. And you also don't analyze for wood

6 correct?

7 A. Not in a scene such as this.

commercial

8 Q. Now, you know that ammonium nitrate has many

9 uses; correct?

10 A. Yes.

11 Q. As a fertilizer?

12 A. I know it's used extensively as a fertilizer.

and you

13 Q. Now, if you were wanting to examine a crime scene

present

14 wanted to find out if there was ammonium nitrate

15 there --

16 A. Yes.

there is

17 Q. -- you would first take account of the fact that

of this

18 no books or literature about ammonium nitrate crystals

19 kind ever having been found; correct?

20 A. I would tend to base it on my and our laboratory's

21 experience, rather than any literature.

22 Q. Yeah.

23 A. But I would -- I would consider what experience and
24 knowledge was available.

25 Q. And in your experience, you've never found
crystals;

11717

Linda Jones - Cross

1 correct?

2 A. Not in a bomb such as this, no.

3 Q. Now, because this is something that you've never
seen

4 before, would you take extra precautions to make sure
that it

5 hadn't happened randomly, accidentally, or as the
result of

6 environmental factors?

7 A. I would take account of the environmental factors.

8 Q. And when you took account of the environmental
factors,

9 would you recognize that ammonium nitrate is
hygroscopic?

10 A. I know that, yes.

11 Q. And would you take account of the fact that in this
12 particular case the ammonium nitrate crystals that were
once on

13 this thing have disappeared?

14 A. I'm aware of that, yes.

there? 15 Q. And do you have a theory about how they got off of

however, 16 A. I don't know how much was there to start with;

appear 17 from the photomicrographs that I've seen, there doesn't

18 to have been very much.

testing; 19 Also, I don't know how much was used in the

fallen off 20 and my guess is that anything remaining could have

21 in the bag during handling or transporting of the item.

bag to 22 Q. Now, do you know if anybody went and looked in the

23 see if it had fallen off?

it didn't 24 A. I think I do, and I don't think any was found, so

25 happen that way.

11718

Linda Jones - Cross

1 Q. So it -- I guess it didn't happen that way.

one. 2 A. I talked myself -- I've talked myself out of that

3 Q. All right. Well, do you have any other theories?

any 4 A. I think -- no, I don't, other than they probably --

at some 5 residue would have been most likely to have fallen off

6 time.

7 Q. And in your opinion, you heard me ask Mr.
Burmeister about

8 the 100 percent humidity situation?

9 A. Yes.

10 Q. Did you agree that that also is a possibility; that
it just

11 evanesced into the air?

12 A. That would be down my list, but then I've only got
one

13 suggestion.

14 Q. And no prior experience with this particular
phenomenon;

15 correct?

16 A. That's right. Well, no, I think that's a little
unfair.

17 Q. I don't mean to be unfair to you, please.

18 A. No, I think I mean -- I have experience from my
chemical --

19 or my education and practice of chemistry what will
happen to

20 different crystals in different circumstances, but I
haven't

21 done any specific tests on what ammonium nitrate does
under

22 certain circumstances.

23 Q. Now, you also testified that this was a bomb in the
-- what

24 size range?

25 A. I think I said 3,000 to 6,000 pounds.

11719

Linda Jones - Cross

1 Q. And that would place it in the midrange; correct?

2 A. Of a midrange.

3 Q. High explosive?

4 A. High-performance explosive. Midrange in terms of
its
5 detonation velocity and performance.

6 MR. TIGAR: May I have just a moment, your
Honor?

7 THE COURT: Yes.

8 BY MR. TIGAR:

9 Q. Now, was it your impression that no ammonium
nitrate other
10 than that that was found on Q507 was present in the
laboratory
11 at the time that Q507 was analyzed?

12 A. That's what I was told.

13 Q. And just to be clear, Mr. Burmeister said that you
had to
14 have a sample to test it against; correct?

15 A. Yes. I think what I interpret by that is that when
I was
16 speaking to Mr. Burmeister when I visited him at his
lab and
17 saw where the testing took place was that there was
none --

in the 18 there was no ammonium nitrate in -- being examined or
testing. 19 vicinity of where he was doing his recovery and
Of 20 course, you need a reference sample to -- to identify
your 21 unknown sample.

Honor. 22 MR. TIGAR: I have no further questions, your

23 THE WITNESS: Thank you.

24 THE COURT: All right. Any redirect?

25 REDIRECT EXAMINATION

11720

Linda Jones - Redirect

1 BY MS. WILKINSON:

recovered 2 Q. Ms. Jones, you were present when the agents who
right? 3 Q507 or Government's Exhibit 664 testified; is that

4 A. Yes.

5 Q. And you heard their direct examination?

6 A. Yes.

7 Q. You heard their cross-examination?

8 A. Yes, I did.

your 9 Q. And does their testimony change your findings or
any way? 10 belief about the ammonium nitrate crystals on Q507 in

11 A. Not in the slightest.

12 Q. Are you concerned in any way about the handling of
Q507?

13 A. No.

14 Q. And do you believe that ammonium nitrate crystals
could
15 have penetrated the plastic bags that Q507 was stored
in?

16 A. No.

17 Q. Now, on cross-examination, you were asked a
hypothetical

18 about a lot of different components that could be in an
19 explosive device.

20 A. Yes.

21 Q. And you told us that you cannot tell us in your
opinion
22 what the device used at the Murrah Building was
actually

23 composed of; is that right?

24 A. That's right. I can't.

25 Q. And is that true for any post-blast crime scenes
that

11721

Linda Jones - Redirect

1 you've been to where the device is actually detonated
2 relatively efficiently, as you've described it?
3 A. I think that's the case. Sometimes the recovery of

4 components and residue are better than others, but
there are
5 many post-explosion scenes where we can go no further
than we
6 can in this case.

7 Q. If you come to a crime scene after the device has
been

8 detonated, is there any way to determine all the
components of

9 the device, if it exploded relatively efficiently?

10 A. That's right. In an explosion of this scale, no.

11 Q. Why is that?

12 A. Because some of the components of the bomb are
going to be

13 either consumed in the explosion, or shattered and
dispersed

14 into such small pieces that they will be
unrecognizable.

15 Q. You were also asked during cross-examination about
your

16 study or your examination of chemical residues in the

17 laboratory, and you contrasted that with the
examination of

18 residues from a crime scene, did you not?

19 A. Yes.

20 Q. And can you tell us why there would be some
difference in

21 what you examine at a crime scene and what you examine
under

22 laboratory conditions?

23 A. I'm sorry?
24 Q. Maybe I've not made the question clear.
25 A. I'm sorry. I'm not quite with you.

11722

Linda Jones - Redirect

whether
that
laboratory.
The
for a
like

1 Q. You were asked about ammonium nitrate crystals and
2 you've ever seen any literature concerning those; is
3 right?
4 A. Yes.
5 Q. And I believe you were asked about testing in a
6 A. Setting up a -- yes. I think -- yes, I'm with you.
7 repeatability.
8 Q. Yes, repeatability.
9 A. Yes.
10 Q. And you said that you can do that under laboratory
11 conditions; is that right?
12 A. That's right, yes.
13 Q. Can you distinguish for us why you can't do that
14 bombing crime scene?
15 A. Because we cannot know exactly what the bomb was
16 before it exploded. When we're doing it at the lab, we

can

cannot 17 define every parameter. There are too many things we

18 know with a crime scene.

19 Q. Does it make any difference to you that there is no
20 literature showing the recovery of ammonium nitrate
crystals at

21 a post-blast scene that you're aware of?

22 A. No, not at all.

23 Q. Why doesn't it?

24 A. Because every crime scene will be different; and if
you set

25 off three bombs, identical bombs in identical
locations, you're

11723

Linda Jones - Redirect

1 likely to find different results from each one.

2 Q. Now, you told us that you can't say what was
actually in

3 this improvised explosive device used at the Murrah
Building;

4 is that right?

5 A. Not specifically, no.

6 Q. But if someone had access to the ammonium nitrate
Mr. Tigar

7 described for you, approximately 4,000 pounds --

8 A. Yes.

9 Q. -- and had access to nitromethane --

10 A. Yes.

11 Q. -- and Primadet --

12 A. Yes.

13 Q. -- and Tovex --

14 A. Yes.

15 Q. -- and blasting caps --

16 A. Yes.

17 Q. -- and a Ryder truck --

18 A. Yes.

19 Q. -- and barrels --

20 A. Yes.

21 Q. -- could someone make an improvised explosive
device that

22 did the damage at the Murrah Building?

23 A. Yes.

24 MS. WILKINSON: No further questions.

25 THE COURT: Any recross?

11724

Linda Jones - Redirect

1 MR. TIGAR: Yes.

2 RE CROSS-EXAMINATION

3 BY MR. TIGAR:

4 Q. You're telling us that with three different bomb
crime

5 scenes --

6 A. No, three different laboratory experiments.

7 Q. Oh. Three bombs in identical locations, you'd get

8 different results from each one. Is that right?

9 A. They wouldn't -- you wouldn't get identical
results, not

10 with the large bombs, no.

11 Q. You'd get very different results; right?

12 A. I'm not sure they'd be very different, but they
wouldn't be

13 identical. For example, if you exploded three
identical bombs

14 in identical locations, you couldn't say, Ah, for
example, with

15 a truck, I will find this piece of truck this distance
from the

16 seat of the explosion in this condition. You would get
a

17 generally similar effect but not identical.

18 Q. You were asked on redirect examination about the
ability of

19 a person that had access to a number of things to build
a bomb;

20 correct?

21 A. Yes.

22 Q. In the hypothetical that you listed in your article
--

23 A. Yes.

24 Q. -- you had someone who had access to bombing
components;

25 correct? Page 23.

11725

Linda Jones - Recross

1 A. Oh, thank you.

2 Q. Two people had access?

3 A. One knew they had access, yes.

4 Q. Right.

5 A. And another person.

6 Q. Yes. And two people had access; correct?

7 A. I think in theory the five people did, because they
all had
8 keys.

9 Q. That's right. Five people had keys to the same
storage
10 shed?

11 A. Yes.

12 Q. And you singled out two?

13 A. It looks like it, yes. I haven't read this for
some time,

14 but I will go with you. If you say there were two --
there
15 were two suspects, then yes.

16 Q. And one was innocent and one was guilty; right?

17 A. One had no knowledge; that's right.

18 Q. Right. And the other did; correct?

19 A. Yes.

20 Q. And that wasn't a question of forensic evidence,
was it?

21 That was a question of other items of proof?

22 A. I would have to read this to refresh my memory.

23 Q. But you do remember the result; correct?

24 A. I remember I organized the scenario so that it was
a

25 surprise to the reader, or I tried to make it a
surprise to the

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Linda Jones - Recross

1 reader who the actual culprit was.

2 Q. And one was a culprit and the other not?

3 A. Yes.

4 Q. Right?

5 MR. TIGAR: No further questions.

6 MS. WILKINSON: This witness is dismissed,
your Honor.

7 THE COURT: Agreed?

8 MS. WILKINSON: Or excused.

9 MR. TIGAR: Yes, your Honor, with our thanks.

10 THE COURT: You may step down. You're
excused.

11 MR. MACKEY: Your Honor, the United States
intends to

12 call one final witness before resting; but before doing

so, I

13 have some additional Government exhibits I would like
to move 14 into admission.

15 THE COURT: All right.

16 MR. MACKEY: Your Honor, we would move to
admit 17 Government's Exhibit 227 and ask the Court to publish
Factual 18 Stipulation No. 6 as it relates to that exhibit.

19 THE COURT: All right. It's been agreed that
20 "Government's Exhibit No. 227 is a guest registration
card in 21 the name of Timothy McVeigh from the Motel 76 in
Albuquerque, 22 New Mexico, for October 30, 1994."

23 Is that agreed?

24 MR. WOODS: Yes, your Honor. That's our
stipulation.

25 THE COURT: All right. So 227 is being
received?

11727

1 MR. MACKEY: Your Honor, may I display it?

2 THE COURT: All right.

3 MR. MACKEY: Your Honor, it's further the
agreement of 4 the parties that the handwriting that appears and now

being

of this 5 shown to the jury on the face of the customer portion

6 exhibit, 227, was written by Timothy McVeigh.

Honor. 7 MR. WOODS: That is the stipulation, your

8 THE COURT: That's confirmed. All right.

time for 9 MR. MACKEY: Your Honor, we also move at this

would 10 the admission of Government's Exhibit 580, which I

City, 11 describe as the phone records from Sprint in Junction

on 12 showing incoming phone calls to the Elliott's Body Shop

exhibit 13 Friday, April 14, 1995. We'd move to admit that

14 pursuant to our stipulation.

exhibit? 15 THE COURT: There is no objection to the

as to the 16 MR. WOODS: No. The parties have stipulated

17 foundation of the phone records, your Honor.

18 THE COURT: All right. So 580 is received.

admit 19 MR. MACKEY: Your Honor, we would also move to

first- and 20 Government's Exhibits 952A and 952B, which are the

the 21 second-floor annotated plans -- that is annotated as to

to admit 22 location of victims on each of those two floors. Move

23 those at this time.

Honor. 24 MR. TIGAR: Subject to our discussion, your

25 THE COURT: Yes. So they're received.

11728

1 MR. MACKEY: Your Honor, as it relates to that
2 particular exhibit, the final witness will identify the
3 location of the victims on the sixth floor, after which
time

4 we'll ask the Court's permission to publish that
exhibit in its

5 entirety.

6 THE COURT: All right.

7 MR. MACKEY: Your Honor, we'd also move to
admit

8 Government's Exhibits '713 and '735 and ask the Court
to
9 publish the related Stipulation No. 24.

10 THE COURT: It's 1713.

11 MR. MACKEY: It is, your Honor. 1713 and
1735.

12 THE COURT: All right. And the stipulation is
that

13 the parties have agreed that "on September 18, 1994,
Marife

14 Nichols traveled from Kansas to the Philippines.

15 "On March 17, 1995, Marife Nichols returned
from the 16 Philippines to Kansas.

17 "On November 22, 1994, the defendant, Terry
Lynn 18 Nichols, traveled from Las Vegas, Nevada, to the
Philippines.

19 "On January 16, 1995, the defendant, Terry
Lynn 20 Nichols, returned to Las Vegas, Nevada, from the
Philippines."

21 Government's Exhibit No. 1713 is an accurate
summary
22 of all travels between the United States and the
Philippines
23 for Marife Nichols, and Government's Exhibit No. 1735
is an
24 accurate summary of all travels between the United
States and
25 the Philippines for Terry Nichols.

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1 MR. MACKEY: Yes, your Honor.

2 THE COURT: So these summary exhibits are
received and
3 stipulated.

4 MR. WOODS: Yes, your Honor. Stipulated.

5 MR. MACKEY: In addition, your Honor, we'd
move to

6 admit Government's Exhibit 1889 subject to the
previously
7 published stipulation. Move to admit the exhibit
itself at
8 this time.

9 THE COURT: Okay. No objection to that?

10 MR. WOODS: No objection, your Honor.

11 THE COURT: 1889 is received.

12 MR. MACKEY: Your Honor, I'd like to display
just a
13 portion of that exhibit.

14 THE COURT: You may.

15 MR. MACKEY: I'm showing at this time to the
jury,
16 your Honor, a portion of Exhibit 1889 bearing the
handwritten
17 name of "Terry Nicols," spelled N-I-C-O-L-S, and a
phone
18 number, (913) 539-9702. We've previously agreed that
that
19 handwriting was of Jennifer McVeigh's.

20 THE COURT: All right.

21 MR. MACKEY: Your Honor, we also move to admit
22 Government's Exhibit 2060. 2060, registration card
from
23 Mr. McVeigh at the Knight's Inn.

24 MR. WOODS: No objection on foundation on the
motel
25 record.

11730

1 THE COURT: Right. Previously been a
stipulation with

2 respect to that from Kent, Ohio.

3 MR. MACKEY: Yes, your Honor. We'd also move
to admit

4 Government's Exhibit 2078 pursuant to Stipulation No.
19.

5 THE COURT: That's agreed to?

6 MR. WOODS: Yes, your Honor.

7 THE COURT: So 2060 and 2078 are both
received.

8 MR. MACKEY: For the record, 2078 is a copy of
a

9 newspaper article appearing on Thursday, April 20,
1995, in the

10 Daily Union newspaper from Junction City, Kansas.

11 THE COURT: Yes. And there is a factual
stipulation

12 on that?

13 MR. MACKEY: Yes, your Honor, No. 19.

14 THE COURT: "On April 20, 1995, the defendant,
Terry

15 Lynn Nichols, purchased the April 20th issues of the
following

16 daily newspapers: The Salina Journal, The Junction
City Daily

17 Union and The Wichita Eagle." Agreed?

18 MR. WOODS: Yes, your Honor. That's the
stipulation.

19 MR. MACKEY: We'd also move to admit pursuant
to
20 stipulation Government Exhibit 2090B, being a portion
of a
21 transcript of a CNN broadcast on Friday, April 21, at
22 approximately 10:06 a.m. Central Standard Time -- that
would be
23 Kansas time.

24 THE COURT: Foundation is admitted or
stipulated, so
25 2090B is received.

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1 MR. MACKEY: Your Honor, could I take the
Court's time
2 to read into the record that transcript at this time?

3 THE COURT: Go ahead.

4 MR. MACKEY: This is a transcript from a CNN
5 broadcast, 10:06 a.m. Central Standard Time.

6 First entry is reporter: "Mr. Kennedy, we're
told
7 that there was a surveillance camera on one of the
nearby
8 buildings that caught a glimpse of a Ryder truck or
some truck
9 believed to have been involved in this just before the
bomb

10 blast went off. Can you tell us anything about that?"

11 The response is from Weldon Kennedy, FBI
spokesperson:

12 "The question is was there a surveillance camera that
may have

13 captured something on film?"

14 Next response from the reporter: "Possibly a
truck

15 with explosives outside the federal building."

16 Next response from Mr. Kennedy: "A possible
truck

17 with explosives. I can confirm that we have a film
which has

18 been sent for analysis. I cannot confirm what's on
that film

19 because at this point, the film was apparently somewhat
damaged

20 and we are trying to improve the image on that film for
21 analysis and it has not yet been completed."

22 Next response from the reporter: "But where
did the

23 film come from? From a surveillance camera in one of
the

24 nearby buildings?"

25 Last response from Mr. Kennedy: "I don't know
the

at this 1 answer to that. It was a nearby building is all I know
2 point."

Factual 3 Your Honor, finally we'd move to publish
4 Stipulations No. 13 and No. 20.

agreed 5 THE COURT: All right. No. 13 is that it is
6 that "Government Exhibit 1748 is a piece of carved jade
7 Lana Padilla retrieved from her son, Barry Ostenkoski,
and 8 turned over to the FBI through her lawyer in December,
1995."

South 9 And 20: It's been agreed that "the State of
10 Dakota has never issued a driver's license to 'Bob
Kling' or 11 'Robert Kling.'

428 12 "The addresses 428 Maple Street or Avenue, or
13 Malp" -- M-A-L-P -- "Street or Avenue, do not exist
either in 14 Redfield, South Dakota, or Omaha, Nebraska."

15 That's been agreed?

so 16 MR. WOODS: Yes, your Honor; and Lana Padilla
17 testified as to that stipulation on 13.

18 THE COURT: All right.

will be 19 MR. MACKEY: Your Honor, the United States

20 prepared to rest after calling Mr. Matt Cooper
tomorrow.

21 THE COURT: Well, we'll hear from that witness
22 tomorrow.

23 And, members of the jury, we went a little bit
beyond
24 the normal time here so that we could get these
stipulations
25 in.

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1 When Mr. Mackey refers to the Government's
expectation
2 that it will rest after the next witness, of course,
that does
3 not mean that the trial is going to end there. It
simply means
4 that that will be the last witness called by the
Government at
5 this point in the case. But, you know, while a
defendant in a
6 criminal trial has no burden or duty of calling any
witnesses
7 or introducing any evidence, there will be witnesses
called by
8 the defense in this case; so, of course, don't jump the
gun
9 here on us and anticipate, well, there is going to be a
close
10 of the evidence tomorrow; what does this all mean? You

wait.

11 There will be a number of witnesses called yet in the
case, so
12 we're not there yet.

13 And that means continue to keep open minds and
be
14 careful of what you read, see, and hear and any form of
15 communication or publication that could relate to any
of the
16 things discussed in the testimony in this case or
involved in
17 the evidence; and also, do not discuss the case with
anyone
18 else, including other jurors.

19 We'll resume as usual at 8:45 in the morning.

20 You're excused until then.

21 (Jury out at 5:06 p.m.)

22 THE COURT: How do you intend to publish those
23 exhibits that have all of the names on them?

24 MR. MACKEY: Your Honor, with the Court's
permission,

25 what we'd ask is that each floor be displayed
momentarily to

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1 the jury without narration or testimony.

2 THE COURT: All right. That was what I wanted
to find

3 out.

4 MR. MACKEY: Yes, your Honor.

5 THE COURT: Okay. Mr. Tigar, did you have
something?

6 MR. TIGAR: No, your Honor. I thought your
Honor

7 wanted to ask my view about that, but our position is
made

8 clear with respect to that.

9 THE COURT: Yes. I think the record is clear
that you

10 have made your position known with respect to that, and
we'll

11 in spite of that proceed as indicated by Mr. Mackey.

12 MR. TIGAR: I understand the Court's ruling.
Thank

13 you, your Honor.

14 THE COURT: About how long is that next
witness?

15 MR. RYAN: Probably 15 minutes, your Honor.
15, 20

16 minutes.

17 THE COURT: Well, I guess we'll have to recess
twice

18 in the morning, then.

19 MS. WILKINSON: Your Honor, could we approach
the

20 bench on one issue that -- one witness that Mr. Tigar
wants to

21 hold? We might be able to resolve it tonight, if we
could.

22 THE COURT: All right. You may approach.
23 (At the bench:)
24 (Bench Conference 100B1 is not herein transcribed
by court
25 order. It is transcribed as a separate sealed
transcript.)

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1 (In open court:)
2 THE COURT: All right. We'll recess. 8:45.
3 (Recess at 5:14 p.m.)
4 * * * * *
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11643 16 Direct Examination Continued by Ms. Wilkinson

11672 17 Cross-examination by Mr. Tigar

11720 18 Redirect Examination by Ms. Wilkinson

11724 19 Recross-examination by Mr. Tigar

20 PLAINTIFF'S EXHIBITS

Withdrawn	21	Exhibit	Offered	Received	Refused	Reserved
	22	227	11726	11727		
	23	580	11727	11727		
	24	655	11659	11659		
	25	695	11645	11645		

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1 PLAINTIFF'S EXHIBITS (continued)

Withdrawn	2	Exhibit	Offered	Received	Refused	Reserved
	3	847	11648	11648		
	4	848	11640	11641		
	5	850	11651	11651		
	6	851	11653	11653		

7	852	11652	11652
8	854	11642	11642
9	952A-952B	11727	11727
10	1713	11728	11729
11	1735	11728	11729
12	1889	11729	11729
13	2060	11729	11730
14	2078	11730	11730
15	2090B	11730	11730
16	2122	11607	11607

DEFENDANT'S EXHIBITS

Withdrawn	18	Exhibit	Offered	Received	Refused	Reserved
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19	D1740	11592	11592
20	E4	11680	
21	E4	11680	
22	E4	11682	11682

* * * * *

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24
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REPORTERS' CERTIFICATE

1
2 We certify that the foregoing is a correct
transcript from

Dated 3 the record of proceedings in the above-entitled matter.

4 at Denver, Colorado, this 1st day of December, 1997.

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Paul Zuckerman

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Kara Spitler

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