

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF COLORADO
3 Criminal Action No. 96-CR-68
4 UNITED STATES OF AMERICA,
5 Plaintiff,
6 vs.
7 TERRY LYNN NICHOLS,
8 Defendant.

ff

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10 REPORTER'S TRANSCRIPT
 (Trial to Jury: Volume 99)

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ff

12 Proceedings before the HONORABLE RICHARD P.
MATSCH,
13 Judge, United States District Court for the District of
14 Colorado, commencing at 8:45 a.m., on the 1st day of
December,
15 1997, in Courtroom C-204, United States Courthouse,
Denver,
16 Colorado.

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23
24
Transcription
Street,
629-9285

Proceeding Recorded by Mechanical Stenography,
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11449

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11 80203, appearing for Defendant Nichols.
12 * * * * *

13

PROCEEDINGS

14

(In open court at 8:45 a.m.)

15

THE COURT: Be seated, please.

16

Good morning.

17

MR. TIGAR: May I approach?

18

THE COURT: Yes.

19

(At the bench:)

20

(Bench Conference 99B1 is not herein transcribed by

court

21

order. It is transcribed as a separate sealed

transcript.)

22

23

24

25

11453

1

(In open court:)

2

(Jury in at 8:48 a.m.)

3

THE COURT: Members of the jury, good morning.

4

JURORS: Good morning.

5

THE COURT: You will recall that when we

recessed on

6

Friday, we were hearing testimony from agent Steven

Burmeister,

7

and we will continue with his testimony this morning.

8 Agent Burmeister, if you'll resume the stand
under the

9 oath taken last week --

10 THE WITNESS: Yes.

11 THE COURT: -- we'll continue.

12 (Steven Burmeister was recalled to the stand.)

13 THE COURT: Miss Wilkinson.

14 MS. WILKINSON: Thank you, your Honor.

15 DIRECT EXAMINATION CONTINUED

16 BY MS. WILKINSON:

17 Q. Good morning, Agent.

18 A. Good morning.

19 Q. When you left on Friday, you were about to tell us
about

20 your examination of a piece of wood fragment from the
bombing

21 scene; is that right?

22 A. Yes.

23 Q. And I believe you were about to discuss some
photographs

24 that you had taken?

25 A. Yes.

11454

Steven Burmeister - Direct

1 Q. Could you just remind the jury when you took those

2 photographs?

3 A. The photographs were taken after I received the
items in
4 April, just after April 28, 1995.

5 Q. Had you removed anything from Government's Exhibit
664, the
6 portion of the truck, before you took those
photographs?

7 A. No. I'm sorry, I removed various small particles
for some
8 color testing prior to the photograph.

9 Q. Did other particles or crystals remain on the wood
10 fragment?

11 A. Yes. Yes.

12 MS. WILKINSON: Your Honor, may I exhibit
those
13 photographs to the jury?

14 THE COURT: Yes, what part --

15 MS. WILKINSON: They're the ones we moved in
on
16 Friday. They're a series, and they're large
photographs.

17 THE COURT: How are they designated?

18 MS. WILKINSON: I believe they're 831 through
835.

19 I'd have to go up to the front to --

20 THE COURT: For the record, we need to know
which --

21 MS. WILKINSON: Sure.

22 There's Government Exhibits 830 through 835.

23 THE COURT: All right. Yes, you may use them.
24 They're in evidence.
25 BY MS. WILKINSON:

11455

Steven Burmeister - Direct

1 Q. Agent Burmeister, if you can grab that wood
pointer. Let's
2 start, if we could, with Government's Exhibit 834. Did
you
3 take this photograph?
4 A. Yes, I did.
5 Q. Can you tell the jury what they're looking at in
this
6 photograph.
7 A. This is a photograph, a black-and-white photograph
of what
8 I'm designating as Q507, the Government Exhibit 664.
It's the
9 wooden side of that particular fragment.
10 Q. Now, could you take 664 out of the bag and hold it
up to
11 the photograph and show the jury how you match it up to
the
12 edge of the photograph. You can stand up from your
seat.
13 A. Okay. Here we see the actual fragment itself, 664,
and if
14 I'm holding it up next to it, the top as we follow

along the

15 top is just up here on this portion here. Let me point
it out.

16 Along in here, all the way, is this particular edge
right in

17 there. So you can sort of it hold that way.

18 Q. Now, if we turn that over to see what we would be
looking

19 at if you could flip this photograph, what is the color
is the
20 side of this large portion here on the upper right-hand
corner?

21 A. We would see that it would be the red side over on
this

22 side as we see on this specimen.

23 Q. So this portion would be what color, if you could
turn it

24 over?

25 A. That would be the yellow side.

11456

Steven Burmeister - Direct

1 Q. And did you examine this entire exhibit under the
2 microscope?

3 A. Yes, I did.

4 Q. Did you focus on particular areas of Government's
Exhibit

5 664 when you were looking at it under the microscope?

6 A. Well, I sequentially looked at the entire item back

and

7 forth as if you're mowing grass, you would go
sequentially back

8 and forth. That's the same technique, so I cover every
square

9 inch of that item.

10 Q. Did you find certain areas of interest when you
looked at

11 Government's Exhibit 664?

12 A. Yes, I did.

13 Q. Did you photograph those areas?

14 A. Yes.

15 Q. Let me show you 835. Did you take that photograph?

16 A. Yes, I did.

17 Q. What are we looking at here?

18 A. It's the same specimen, Q507. It's an enlarged
area. Now

19 we're looking closer onto the surface, but it's this
general

20 area right here that I wanted to focus in on.

21 Q. Why is that?

22 A. It's in this general area right here I started
noticing a

23 line of crystalline material, some embedded but on the
surface

24 of this particular wooden area.

25 Q. Was there just one crystal here or numerous
crystals?

11457

Steven Burmeister - Direct

1 A. No, there was a whole series of crystals all the
way
2 through here and also extending down this particular
line and
3 some actually in here.

4 Q. How were the crystals attached to the wood
fragment, Q507?

5 A. Some of them were actually down inside the wooden
area,
6 embedded into the surface. Some were on the top of it
over in
7 this area, and they were adhering to the particular
material.

8 Q. Did you use a certain term to describe how these
crystals
9 were -- or how you observed the crystals attached to
Q507?

10 A. Yes, I did.

11 Q. What is that?

12 A. In my notes I described them as a glaze on the
surface, and
13 that's generally a glaze being just a covering over
this
14 particular area.

15 Q. Now, I'm going to show you 832. Is this an
enhancement of
16 what we were just looking at?

17 A. Yes, it is.

18 Q. And explain to the jury what this is.
19 A. Now we're actually looking closer at the surface.
We've
20 magnified the actual image with the microscope, looking
deeper
21 and closer into the material. And we can see right
along here,
22 this deposit on the surface right here, the crystalline
23 particles; each little, tiny particle is a crystal
itself. And
24 they're sort of clear, very much like a small particle
of sugar
25 or salt, but that's what it would look like on the
surface

11458

Steven Burmeister - Direct

1 here. And you can see those little individual
particles.
2 Q. How did you distinguish between these little
particles and
3 little particles we see up in this area?
4 A. That was part of the initial testing with the color
spot
5 test. I talked on Friday about diphenylamine where we
could
6 take an individual particle and then react it with this
7 chemical and look for the color response. And in this
case, a
8 deep color was produced indicating that there was a
strong

step. 9 oxidizer present, and that allowed me to go to the next

way 10 So sequentially testing some of these particles all the

even up 11 through, and especially in this particular area, some

12 in here, were giving me this strong blue color.

here for 13 Q. Did you examine these crystals in this area and up

14 their crystalline structure?

15 A. Yes.

structures of 16 Q. Did you see similarities in the crystalline

the jury? 17 some of these small particles that you pointed out to

18 A. Yes.

photographs of 19 Q. Agent Burmeister, did you also take color

20 this -- Government's Exhibit 664?

21 A. Yes, I did.

22 Q. Let me show you 830. What is this?

again 23 A. This is a color photograph of the same surface on
24 Government Exhibit 664 or what I'm calling Q507. But

the way 25 it's in this particular area; we see the deposit all

11459

Steven Burmeister - Direct

photo, 1 along in this line and some, as we saw on the previous
it's 2 up in -- into this area and some down in here. But
3 principally along this area, but it's a color
photograph of the 4 same material.

5 Q. Were the crystals that you found glazed on Q507 in
this 6 general area here?

7 A. Yes.

8 Q. Did you find them on the entire Government's
Exhibit 664?

9 A. No.

10 Q. And here is Government's Exhibit 831. Does this
focus on 11 that same upper right-hand portion of Q507?

12 A. Yes. It's now we're coming away from the object.
We're 13 still focusing on this particular area right in here.

14 at the particular item itself. We're actually focusing
We look 15 particular spot right in here. I always like to -- if
16 you're -- if you have this item and you're trying to
compare it

17 to the photo, not only the ridges across the top, but
this

18 little indentation right here is sort of a good
landmark to try

19 to key in on where the particular item is. But it's

right

20 along this ridge right here.

seeing

21 Q. Does the color photograph assist you in any way in

22 the contrast with the crystals?

white, but

23 A. It does assist in that -- I prefer the black and

24 the color does show some depth to the particular wood.

25 Q. Why do you prefer the black-and-white photographs?

11460

Steven Burmeister - Direct

on the

1 A. Because I can see the crystals a little bit better

2 photo.

did you

3 Q. After you took these photographs, Agent Burmeister,

found on

4 conduct a series of tests on the crystals that you

5 Government's Exhibit 664?

6 A. Yes.

testing?

7 Q. And did you take notes as to the results of that

8 A. Yes, I did.

9 Q. Did you analyze the data that you received?

10 A. Yes, I did.

11 Q. Did you come to some conclusions about the crystal?

12 A. Yes.

13 Q. And have you formulated a chart for the jury that
14 summarizes the testing and your results?

15 A. Yes.

16 Q. Let me show you Government's Exhibit 1744. Do you
17 recognize that?

18 A. Yes, I do.

19 Q. Is that the chart that you prepared?

20 A. Yes.

21 Q. Or assisted in preparing?

22 A. Yes.

23 Q. And does it summarize the tests and the results of
those
24 tests that you performed on the crystals on Q507?

25 A. Yes, it does.

11461

Steven Burmeister - Direct

1 MS. WILKINSON: Your Honor, we'd offer 1744
under Rule

2 1006 as a summary chart of Agent Burmeister's results.

3 MR. TIGAR: May I inquire from here, your
Honor?

4 THE COURT: Certainly.

5 VOIR DIRE EXAMINATION

6 BY MR. TIGAR:

7 Q. Mr. Burmeister, I've got one, two, three, four,

five, six,

is that 8 seven, eight, nine, ten, eleven tests reflected here;

9 correct, sir?

sounds 10 A. I'd have to see the chart to verify that, but it

11 correct.

12 Q. Okay.

13 There you are.

14 A. You're right. Yes.

report; 15 Q. And each one of these tests is the subject of a lab

16 correct?

report 17 A. It's incorporated within the particular laboratory

are used 18 as far as the data that's derived from these tests and

laboratory 19 to interpret to come to the result that's in the

20 report.

in it? 21 Q. Okay. So just one report that has all these tests

together 22 A. The results of all these tests were incorporated

23 to form the opinion which is in the report.

demonstrative 24 MR. TIGAR: Your Honor, no objection for

25 purposes. It doesn't meet 1006.

Steven Burmeister – Voir Dire

his 1 THE COURT: Yes, it's not 1006. It includes
2 opinions.

demonstrative 3 MS. WILKINSON: We'll show it for
4 purposes.

5 THE COURT: All right.

6 DIRECT EXAMINATION CONTINUED

7 BY MS. WILKINSON:

to the 8 Q. Will this assist you, Mr. Burmeister, in explaining
9 jury the testing you did on Q507?

10 A. Yes.

took 11 Q. Now, first, Mr. Burmeister, you told us that you
12 photographs of the crystals that you found; isn't that
right?

13 A. Well, the initial testing was doing a microscopic
14 examination, and several particles which were
test was 15 interesting-looking particles were removed. A color
16 performed on those particles. Subsequent to that, a
photograph
17 was taken of the area.

a 18 Q. The results of that first test showed you there was
19 reading for a oxidizer?

20 A. Yes.

21 Q. And can you tell us again what an oxidizer is.

22 A. An oxidizer is a material that will readily promote
the
23 release of oxygen. In the world of explosives, it
plays a very
24 important part because materials that do release oxygen
are
25 those that look for a fuel source which can come
together to

11463

Steven Burmeister - Direct

1 form an explosive material.

2 Q. Now, when you took the photographs of Q507 or
Government's
3 Exhibit 664, why did you take photographs?

4 A. The purpose was to record its actual location and
to show
5 its actual crystalline form on the particular surface.

6 Q. Did any of the crystals that you photographed
survive on
7 Q507 today?

8 A. No.

9 Q. Okay. Did -- after you finished conducting your
tests on
10 the crystals you found on the exhibit, did you send
that
11 exhibit in the FBI Laboratory for further testing?

me, and 12 A. I returned it to the individual who presented it to
13 it went for further testing, yes.

further 14 Q. And would that further testing -- could that
15 testing have affected the crystals that you found?

16 MR. TIGAR: Object to what could have been.

17 BY MS. WILKINSON:

18 Q. If you know.

19 MS. WILKINSON: Excuse me, your Honor.

20 THE COURT: Okay.

21 BY MS. WILKINSON:

have 22 Q. Agent Burmeister, if you know, could that testing
23 affected the crystals on Q507?

24 A. It's entirely possible, yes.

25 MR. TIGAR: Objection as to possibility.

11464

Steven Burmeister - Direct

possibility. 1 THE COURT: Yes, it's stricken as to

2 BY MS. WILKINSON:

3 Q. Are you aware of Mr. Buechele's testing on Q507?

4 A. Yes.

5 Q. And did he do a paint analysis?

6 A. He looked at the coating material that was on the

surface,

7 the opposite painted surface.

8 Q. And only if you know, could that affect the
crystals on

9 Q507?

10 THE COURT: Well, again, the question here is
did it,

11 not could it.

12 BY MS. WILKINSON:

13 Q. Did it, Agent Burmeister?

14 THE COURT: If you know from your own
knowledge.

15 THE WITNESS: I don't know for a fact if that
was the

16 particular part of the examination that removed or
caused it to

17 disappear.

18 BY MS. WILKINSON:

19 Q. Okay. But the crystals did disappear from Q507
since you

20 did your testing; is that right?

21 A. Yes.

22 Q. And do the photographs show the crystals that you
actually

23 saw under the microscope?

24 A. Yes.

25 Q. Can you describe for the jury generally the
crystalline

11465

Steven Burmeister - Direct

the 1 structure of those particles that you examined under
2 microscopes?

table salt 3 A. The particles themselves looked like crystals of

much 4 or sugar. That would be the size -- not the size, but

if we 5 smaller than that, but still it's a crystalline form as

6 looked at sugar or table salt.

7 Q. Are you familiar with the crystalline structure for
8 ammonium nitrate?

9 A. Yes, I am.

the 10 Q. And what were -- if you -- can you tell us whether

crystalline 11 results of your microscopic examination of the

with your 12 structures of those particles on Q507 was consistent

13 knowledge of the crystals of ammonium nitrate -- the

14 crystalline structure of ammonium nitrate?

15 A. Certainly was consistent with it, yes.

16 Q. What test did you conduct next?

light 17 A. The next test that I conducted was a polarized

using a 18 microscopy examination of the particle. It's again

19 crystals microscopic test, but it's looking at the particular
20 themselves, using a specialized microscopic
examination.
21 Q. What were the results of those tests?
22 A. It was consistent with ammonium nitrate.
23 Q. And what are you looking for in that type of test?
24 A. Essentially you're looking at the material's
ability to
25 essentially bend light. Essentially that's what you're
looking

11466

Steven Burmeister - Direct

1 for.
2 Q. Did you cause another test to be conducted after
that?
3 A. Yes.
4 Q. What test was that?
5 A. After that was conducted, a FTIR or Fourier
transform
6 infrared spectroscopy examination was conducted.
7 Q. Can you tell us generally what FTIR does.
8 A. I know that's a mouthful. It's essentially taking
the
9 material and passing a beam of infrared energy through
the
10 material and sort of capturing how much of that
infrared beam

11 is actually absorbed into the material itself, and you
can

12 record that on the opposite side and measure a
spectrum, if you

13 will, a fingerprint pattern of how much of that light
is

14 absorbed.

15 Q. How does that assist you in identifying what the
particle

16 is?

17 A. You can run the sample and then run a known sample
and

18 compare the two and determine whether it's consistent
with that

19 particular spectrum.

20 Q. At that point did -- had you concluded that the
crystals

21 were consistent with ammonium nitrate?

22 A. Yes.

23 Q. Did you inform the operator of the FTIR machine of
that

24 conclusion?

25 A. Yes, I did.

11467

Steven Burmeister - Direct

1 Q. And did she compare a known sample of ammonium
nitrate with

2 the crystal -- or the crystals that you gave her from
Q507?

3 A. Yes.

4 Q. What were the results of that comparison?

5 A. That it was consistent with ammonium nitrate.

6 Q. Did you cause further testing to be conducted?

7 A. Yes.

8 Q. What type of tests were conducted after that?

9 A. Next it was a ion chromatography test, basically to
10 determine what ions were present in the particular
substance

11 itself.

12 Q. Now, are ions different from the crystal itself?

13 A. Yes.

14 Q. How is that?

15 A. Once you take a material and place it into water,
the

16 material will break down into its ions, and the ions
are

17 basically charged particles. If we look at something
like

18 sodium chloride, sodium has a positive charge to it.
It's

19 entire positive charge. Chloride has a negative
charge. And

20 it works the same way as batteries or magnets where
they will

21 attract one another, the positive and the negative will
attract

22 one another. In the world of chemistry, we look at the
same

23 way we look at batteries. The positive side of any cat
-- any
24 ion is considered a cation, and it's also consistent
with
25 batteries where it's called cathode on a battery. The
negative

11468

Steven Burmeister - Direct

1 side of a particular ion is called an anion, and it
2 corresponded to a battery's anode, so it's the same way
for
3 electrical impulses, but ions are formed when material
are
4 placed into water, they will break down into their
charged
5 particles.

6 Q. Did you break down some of the ammonium nitrate
crystals in
7 that type of testing?

8 A. Yes. Now, ammonium nitrate, when placed into a
water
9 solution, will break down into ammonium ions which have
a
10 positive charge and nitrate ions that have a negative
charge.

11 Now, they're floating around in the solution. We have
to find
12 a way, now, to analyze those particular ions.

13 Q. What were the results of that testing?

14 A. Based on ion chromatography for the cations, it was
15 identified that ammonium ions were present in that
particular
16 material.

17 MR. TIGAR: Your Honor, I'd like some -- I
object to
18 the form of the question and answer. We don't know
who's doing
19 the testing here. It's in the passive voice and no
basis or
20 foundation for the opinion.

21 MS. WILKINSON: I believe I said "under your
22 direction" or "caused it to be conducted" --

23 BY MS. WILKINSON:

24 Q. Agent Burmeister, did you conduct every one of
these tests
25 yourself?

11469

Steven Burmeister - Direct

1 A. No.

2 Q. And is that your policy in the laboratory?

3 A. Yes.

4 Q. Do you have technicians who operate instruments for
you?

5 A. Yes.

6 Q. And who interprets the results of that instrument
testing?

7 A. I interpret the results, yes.

8 Q. Are you the only one who did that for Q507?

9 A. Yes.

10 Q. Now, did you conduct these tests on the ions,
yourself?

11 A. I had an operator conduct the actual examination on
the

12 instrument under my direction.

13 Q. And did you review the results?

14 A. Yes.

15 Q. And did you interpret the results?

16 A. Yes, I did.

17 Q. And what did you find?

18 A. The material for the cation analysis identified
ammonium

19 nitrate -- ammonium ions. When the anions were
identified, it

20 was identified as nitrate ions.

21 Q. Did you cause any other tests to be -- well, let's
stop

22 there.

23 In your laboratory, do you make different
kinds of

24 findings when you're trying to identify substances?

25 A. There are different findings, yes.

11470

Steven Burmeister - Direct

1 Q. Do you sometimes say something is consistent with?

2 A. Yes.

3 Q. And do you sometimes actually identify something as
a
4 substance?

5 A. Yes.

6 Q. What is the difference between "consistent with"
and
7 "identified"?

8 A. The "identified" is an absolute. We have two
alternative
9 technologies coming up with results, and the two must
match
10 together for an identification. These are two
different
11 technologies. If I have the same finding with those
two
12 different technologies, it's an identification. When I
have
13 one finding, I will consider that consistent with the
material
14 being present.

15 Q. All right. At this point in your examination,
before you
16 conducted further testings, were you able to identify
the
17 crystals as ammonium nitrate?

18 A. At this point in time, I would have considered it
an
19 identification, yes.

20 Q. Despite that, did you conduct further testing?

21 A. Yes.

22 Q. Or cause further testing to be conducted?

23 A. Further testing was conducted.

24 Q. Did you work with any other examiner in your
laboratory at

25 that point?

11471

Steven Burmeister - Direct

1 A. Yes.

2 Q. Who did you work with?

3 A. A Special Agent Bruce Hall.

4 Q. And what is his area of specialty?

5 A. He is a minerologist and a microscopist.

6 Q. And why did you work with him on Q507?

7 A. He has an ability to actually look at the
microcrystalline

8 areas of particular materials, and I wanted to see what
his

9 opinion was on looking at the particular material
itself.

10 Q. Did you both look under the microscope at the
crystals on

11 Q507?

12 A. Yes.

13 Q. And what additional test did he assist you with?

one, he 14 A. One of the things that he was able to conduct --
chemicals to 15 has the abilities with the various reagents and
actual 16 conduct this, but to make the determination of the
light was 17 refractive index, and when I talked about how much
I call 18 actually bent by that particular material, that's what
particular 19 refractive index. It's a very specific number for
20 materials, especially for crystalline materials.
determine 21 And one of the things that you have to do to
materials to -- 22 this refractive index is have a series of known
all of 23 known refractive indexes that you compare to. He has
him, 24 those chemicals, and that's the reason why I went to
side by 25 because he had all the chemicals present, and I did it

11472

Steven Burmeister - Direct

1 side with him.
2 Q. Did you have additional testing done outside of the
FBI 3 Laboratory?
4 A. Yes, I did.

5 Q. What did you do?
6 A. A particle of material was analyzed using a
technique
7 called x-ray diffraction, but it utilizes a special
type of
8 tool with x-ray diffraction, called a Gandolfi camera.
9 Q. Does the FBI Laboratory have a Gandolfi camera?
10 A. No, it does not.
11 Q. Where did you go to have this type of analysis
done?
12 A. The Smithsonian Institution has a Gandolfi camera
which we
13 used to conduct that particular test.
14 Q. How -- and just simply if you could -- how does a
Gandolfi
15 camera operate?
16 A. The Gandolfi camera operates by taking an actual
tiny
17 particle, an actual crystal itself, placing it into the
18 instrument, and striking that little, tiny particle
with a beam
19 of x-rays. And if we look at a simple analogy of
taking a
20 flashlight and shining it onto the surface of the
mirror, we
21 see that the beam can strike the mirror and be
reflected off at
22 a different angle. Well, if you imagine a crystalline
material
23 as having hundreds and thousands of little, tiny
mirrors built

particular 24 up inside and if you shine the flashlight on that
different 25 material, the beams will be diffracted or bent off at

11473

Steven Burmeister - Direct

material 1 angles. That's what's going on inside the particular
are bent 2 when you strike it with a beam of x-rays. The x-rays
bent off 3 off at various angles. The angles at which it can be
for a 4 can be analyzed, and that forms a fingerprint pattern
5 particular substance.

crystals 6 Q. And was a picture of this fingerprint taken of the
7 or a crystal from Q507?

8 A. Yes.

photograph 9 Q. And did you and others compare that to a known
10 of ammonium nitrate crystals?

11 A. Yes.

12 Q. And what were the results?

13 A. It was consistent with ammonium nitrate.

crystals from 14 Q. Did you cause any other testing to be done on
15 Q507?

16 A. That was the end of the examination.

17 Q. Did you look at Q507 itself for any high
explosives?

18 A. Yes, I did.

19 Q. And what were the results of those tests?

20 A. They were negative for any of the explosives we
tested for.

21 Q. And did that assist you in coming to the conclusion
that

22 the crystals on Q507 were ammonium nitrate?

23 A. Yes.

24 Q. How did it assist you?

25 A. It essentially ruled out any other particular
materials

11474

Steven Burmeister - Direct

1 that were present.

2 Q. Did you find any other elements on Q507?

3 A. One of the things that was also conducted was an
elemental

4 examination of the materials itself.

5 Q. What elements did you find on Q507?

6 A. The trace elements that were present on the
crystalline

7 material on Q507 were silicon, aluminum, and sulfur.

8 Q. After conducting all these tests, Agent Burmeister,
what

crystals 9 were your conclusions as to the identification of the

10 on Government's Exhibit 664, what you refer to as Q507?

was 11 A. The crystalline material on Q6 -- Item 664 or Q507

12 identified as ammonium nitrate.

explosives 13 Q. You are -- are you familiar in your work with

14 that contain ammonium nitrate?

15 A. Yes.

nitrate? 16 Q. And what type of explosives contain ammonium

contain 17 A. There's wide number of explosives that actually

ammonium 18 ammonium nitrate. There's dynamites that contain

explosives 19 nitrate. There's slurries and emulsions which are

agents -- 20 out on the market today. There's various blasting

ANFO -- 21 for example, ammonium nitrate and fuel oil which is

22 which contains ammonium nitrate.

could 23 Q. Now, after you came to these conclusions that you

review the 24 identify the crystals as ammonium nitrate, did you

25 chain of custody for Q507, Government's Exhibit 664?

Steven Burmeister - Direct

1 A. Yes, I did.

2 Q. And did you determine whether the chain of custody
could

3 have contaminated -- or the handling of Government's
Exhibit

4 Q507 or 664 could have contaminated that item?

5 A. Yes.

6 Q. What were your conclusions?

7 A. That it would not have contributed to any
contamination on

8 that item.

9 Q. Knowing that -- you see Government's Exhibit 664 in
front

10 of you; correct?

11 A. Yes, I do.

12 Q. And do you see the two plastic bags, 664A and B?

13 A. Yes.

14 Q. Was 664 contained in those plastic bags when you
received

15 it?

16 A. They were in these plastic bags when I received it,
yes.

17 Q. In your opinion, could the ammonium nitrate
crystals have

18 penetrated the plastic bag to land on Government's
Exhibit 664?

19 A. No.

20 Q. And could they have appeared in that crystalline

structure

21 if they had somehow penetrated the plastic bag?

22 A. No.

plastic

23 Q. During your work on this case, did you also examine

24 fragments that were taken from the bombing crime scene?

25 A. Yes.

11476

Steven Burmeister - Direct

Excuse me,

1 Q. I'm going to show you 785, 785A, 786, and 786B.

786, and

2 I'm not going to show you 785A. The others are 785,

3 786B. Did you recognize those?

4 A. Yes, I do.

Q116?

5 Q. And did you -- are they also designated Q112 and

6 A. Yes.

Unit?

7 Q. Were they tested by the Chemistry and Toxicology

8 A. Yes, they were.

9 Q. Were they tested for high-explosives residue?

10 A. Yes.

solution did

11 Q. And during that testing process, what type of

12 you put on the plastic fragments?

13 A. During the testing process, there would have been

two

14 solutions that were placed onto them. The first one
would have

15 been water. The second one was methanol.

16 Q. And would those solutions have consumed any powders
or any

17 particles that were on the outsides of the plastic
fragments?

18 A. Yes, that's -- would have been the purpose of the
19 solutions.

20 Q. Do you recall when you conducted that testing for
21 high-explosive residue on the plastic fragments?

22 A. Offhand, the exact date, I'm not sure of.

23 Q. Do you recall the month?

24 A. Without checking my documents, I'm a little --
having

25 trouble right at the moment recalling the exact date.

11477

Steven Burmeister - Direct

1 Q. If I showed you a document to refresh your
recollection in

2 chain of custody, would that assist you?

3 A. Yes.

4 Q. Does that refresh your recollection?

5 A. Yes, it does.

6 Q. When did you test the Q112 and Q116 for high-
explosives

7 residue?

8 A. It would have been shortly after April 26, 1995.

9 Q. And did you find any high-explosives residues on
the
10 plastic fragments?

11 A. No.

12 Q. Agent Burmeister, from examining Q507 and
identifying the

13 crystals as ammonium nitrate, can you identify or can
you tell

14 the jury how those crystals were placed on Government's
Exhibit

15 Q507?

16 A. The crystals were on the surface of the material as
well as

17 embedded up inside the wooden area of the material,
penetrated

18 some parts of the material itself.

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

20 not those crystals could have been reformed; that is,
that they

21 were applied there from the rain or some water solution
instead

22 of embedded in some other way?

23 MR. TIGAR: Object to what could have been,
your

24 Honor.

25 THE COURT: Perhaps you ought to use
"consistent

11478

Steven Burmeister - Direct

1 with."

2 MS. WILKINSON: I'll rephrase it. Thank you.

3 THE COURT: Thank you.

4 BY MS. WILKINSON:

5 Q. Mr. Burmeister, can you tell us whether the
crystalline

6 structure that you saw of the ammonium nitrate on Q507
is

7 consistent with the reformulation of ammonium and
nitrate on

8 that Government's Exhibit 664 from a water solution, or
from

9 rain, or from something like that?

10 A. It's not consistent with that crystalline form, no.

11 Q. Why is that?

12 A. The crystalline form of recrystallized ammonium
nitrate is

13 in a different visual format. It's more of a
flattened, all

14 one segment of crystalline development. It's not
individual

15 particulate crystals. It's just a flattened all-one-
mass that

16 usually is formed.

17 Q. So were the crystals that you saw in Government's
664 or

18 Q507 consistent with being in the original crystalline
19 structure of ammonium nitrate?

20 A. Yes.

21 MS. WILKINSON: We have no further questions,
your
22 Honor.

23 THE COURT: All right.

24 Mr. Tigar.

25 CROSS-EXAMINATION

11479

Steven Burmeister - Cross

1 BY MR. TIGAR:

2 Q. Good morning, Agent Burmeister.

3 A. Good morning.

4 Q. In May of 1995 -- April, May of 1995, you were the
sole
5 person qualified in the FBI Laboratory as an expert on
6 explosives; is that right?

7 A. No. That's not correct.

8 Q. Who else was?

9 MS. WILKINSON: Objection, your Honor,
relevance.

10 THE COURT: Well, I don't know yet.

11 BY MR. TIGAR:

12 Q. Who else --

13 THE COURT: For this particular question, I
overrule

14 the objection.

15 BY MR. TIGAR:

16 Q. Who else was qualified?

17 A. Mr. Kelly was partially qualified in the area of
explosives

18 examination on bulk analysis. He was not qualified for
the

19 residue side.

20 Q. In terms of explosives residues, were you the
person best

21 qualified in the laboratory?

22 A. I would consider myself, yes.

23 Q. And since then you've been promoted; you're the
acting

24 chief; is that right?

25 A. Yes.

11480

Steven Burmeister - Cross

1 Q. So -- and you agreed that you should be acting
chief;

2 correct?

3 MS. WILKINSON: Objection, your Honor.

4 THE COURT: Sustained.

5 BY MR. TIGAR:

6 Q. Well, I'm just saying, you're qualified to give the

7 opinions you've given; correct, sir?

8 A. The courts make that determination. But I feel so,
yes.

9 Q. And are you able to tell the jury what the bomb
that blew
10 up the Murrah Building was made of?

11 MS. WILKINSON: Objection, your Honor; that's
beyond
12 his area --

13 THE COURT: Sustained.

14 BY MR. TIGAR:

15 Q. Well, let's start, sir. You identified some
ammonium
16 nitrate on Q507; correct?

17 A. Yes.

18 Q. You tested Q507, Government 664 -- if we can take
this
19 down, now. I'll put it up on . . .

20 You testified on direct examination that you
tested it
21 for high-explosive residue; correct?

22 A. Yes.

23 Q. Why did you do that?

24 A. It's part of the entire protocol and procedure that
I
25 follow. The materials will always be tested for the
inorganic

Steven Burmeister - Cross

1 side as well as the organic side. The organics will
fall under 2 the side of the high explosives.

3 Q. And you did that because you were trying to find
out what 4 was in the device; right?

5 A. It is part of the test used to determine what
explosives 6 are present on a particular item.

7 Q. Well, you testified, sir, on direct examination
that you 8 saw the reports of the weather on the evening of the
19th; you 9 remember that?

10 A. Only from the television reports.

11 Q. Right. And you were concerned when you saw the
weather 12 reports; correct?

13 A. Yes.

14 Q. Why were you concerned?

15 A. For me as a person who's involved with determining
16 residues, anytime something is deluged with rain, it's
17 certainly an environmental-type situation that I have
to deal 18 with where potentially water-soluble explosives could
be washed 19 off of particular items.

by 20 Q. And that . . . You dealt with that concern in part
that is 21 trying to test items at the scene on the underside;
22 correct, sir?
23 A. That is correct, yes.
24 Q. And you tested glass fragments; is that right?
25 A. Yes.

11482

Steven Burmeister - Cross

1 Q. Did you pick up any foam?
2 A. Not off of the surface, but I did remove some foam
from the 3 protected areas of vehicles.
4 Q. And did you test that for high-explosive residue?
5 A. Yes.
6 Q. Did you find any?
7 A. No.
8 Q. Did you pick up some plastic?
9 A. I don't recall whether I retrieved any particular
plastic 10 pieces, myself.
11 Q. A number of plastic pieces were retrieved; correct?
12 A. Yes.
13 Q. And they were sent to your laboratory; correct?
14 A. Yes.

15 Q. How many of them were sent to your laboratory?
16 A. I have no idea the number of pieces of plastic.
17 Q. Hundreds?
18 A. I really can't come up with a number.
19 Q. Did Mary Tungol work under your direction?
20 A. Yes.
21 Q. Was she responsible for looking at the plastic?
22 A. I have no idea whether she was involved with that.
23 Q. Who washed the pieces of plastic that you have in
front of
24 you with water and methanol?
25 A. That was myself.

11483

Steven Burmeister – Cross

1 Q. Are those the only pieces that you washed?
2 A. I conducted residue examination on numerous pieces
of
3 items, and the extraction practice with solvents was
conducted
4 on many of those items.
5 Q. Well, my question was, sir, the pieces of plastic
in front
6 of you, are those the only pieces of plastic from the
crime
7 scene that you washed with water and methanol?
8 A. I really am not sure. There's a possibility other

pieces

9 were examined. I'm not sure.

those 10 Q. Well, what was the purpose, again, of your washing

11 particular pieces?

12 A. For explosive residues.

13 Q. And you didn't find any; correct?

14 A. That's correct. Yes.

wasn't to 15 Q. Now, you said that the purpose of washing them

16 make them clean, was it?

17 A. No. My examination is for explosive residues.

every 18 Q. And is it your testimony that that washing removes

19 trace of everything that was on there, makes them just

20 spotless?

with the 21 A. No. There are materials still left behind. Even

22 rinsing, there's some materials -- for example, high

plastic 23 explosives -- that will be absorbed into particular

24 material.

distorted, 25 Q. And these plastics that you have there, they're

11484

Steven Burmeister - Cross

1 they have little pockmarks on them; correct?

but 2 A. Well, I don't know what their original form was,
3 they're irregular shapes.

would 4 Q. And is it your testimony that the washing you did
have 5 remove everything that was on them, anything that might
6 adhered?

me in 7 A. It would not remove everything, but it would assist
8 conducting an examination.

looking at 9 Q. Now, did you also -- were you -- why were you
10 plastic?

extremely useful 11 A. One of the many types of surfaces that are
materials, 12 for explosive residue analysis happens to be plastic
-- all 13 plastic, foams, rubber material, glass, pieces of metal
very 14 are very good surfaces, including wood surfaces -- are
15 good to capture and hold. Plastic, for example, is an
area of 16 outstanding surface for high explosives because in the
we have a 17 organic explosives, likes dissolve in likes; and here
would be 18 case that likes, the high explosives, the organics,
19 soluble in plastic which are organic in nature.

20 Q. Well, when we talk about high explosives, you mean

things

21 like what's contained in a blasting cap, PETN?

22 A. That's correct.

23 Q. Okay. And then there's the stuff that's inside
that orange

24 shock tube that's in Primadet that's called HMX;
correct?

25 A. Yes.

11485

Steven Burmeister - Cross

1 Q. Is that a high explosive?

2 A. Yes, it is.

3 Q. Ammonium nitrate is not a high explosive, is it?

4 A. It can be considered a high explosive, yes.

5 Q. I'm talking about ammonium nitrate that I go to the
6 hardware store and buy in a bag. Is that considered a
high
7 explosive?

8 A. Certain types of ammonium nitrate, certainly mixed
with
9 certain fuel samples can instantly become a high
explosive.

10 Q. Well, I didn't ask you that, sir. I asked you if
ammonium
11 nitrate that I buy at the hardware store is a high
explosive.

12 A. It could be.

13 Q. How do I get it to detonate?

14 A. There's various methods of detonating particular --
15 particular ammonium nitrate samples. The ammonium
nitrate
16 itself has been shown under the right conditions can be
17 detonated, itself.

18 Q. By burning it; correct?

19 A. No. Burning will not actually detonate the
ammonium
20 nitrate itself.

21 Q. What do I have to do to it to make it explode?

22 A. You have to have some other high force that's
applied to it
23 in order for it itself to detonate.

24 Q. Such as by mixing fuel oil with it and putting a
25 charge-like blast right with it or putting dynamite
with it?

11486

Steven Burmeister - Cross

1 Would that -- that would make it explode, wouldn't it?

2 A. Dynamite would allow that combination, if properly
mixed
3 with -- your ammonium nitrate and fuel oil is properly
mixed.

4 Q. If I have a bag of ammonium nitrate in my house and
I don't
5 have any fuel oil and I don't have any other things
like that,

6 it's just fertilizer; correct?

7 A. Well, it's been shown that ammonium nitrate can be
exploded

8 by itself under the right conditions.

9 Q. And what are -- I'm sorry, but you have to add
something to

10 it; correct?

11 A. Not necessarily, no.

12 Q. What do you have to do to it, sir?

13 A. You again have to apply some sort of high energetic
force

14 to have it detonate.

15 Q. What kind of high energetic force do you have to
apply it?

16 A. It would have to be something that's a high
explosive

17 that's operating in a strong force-like manner to break
it

18 down.

19 Q. So it has to be ammonium nitrate plus something --
right --

20 plus some other chemical substance; right?

21 A. No, that's not necessarily correct.

22 Q. Well, how -- the high explosive you're talking
about is

23 another chemical substance, isn't it, sir?

24 A. The other material that would be providing that
extra force

25 in order to initiate is another high-explosive
material.

11487

Steven Burmeister – Cross

1 Q. Now, when you went to the crime scene, did you
cause people

2 to look for plastics that were inside, underneath the
protected

3 areas of the Murrah Building?

4 A. These would be areas that would be good locations
to look

5 for.

6 Q. All right. And did you test any of those things
for high

7 explosives that you found inside? Explosive residue?

8 A. There were numerous items submitted, the exact
location of

9 those items, I'm not sure.

10 Q. Did you test a piece of blue PVC plastic that you
found

11 inside the building?

12 A. I don't recall examining that.

13 Q. You know that there was one; correct?

14 A. I recall seeing various pieces of blue plastic that
were

15 submitted for the polymer individuals. I never looked
at those

16 particular items, myself.

17 Q. Well, was the plastic that you have in front of you

18 examined under your direction?

19 A. I examined these pieces of plastic, myself, yes.

20 Q. Well, how did you choose which ones you were going
to

21 examine and which ones you were not?

22 A. Initially these were the items that were submitted
to me

23 for examination for explosive residue.

24 Q. And who made the choice as to which ones you were
going to

25 look at?

11488

Steven Burmeister - Cross

1 A. I would have made the initial request for various
pieces of

2 plastic for the examination, and they would have been
provided

3 to me for examination.

4 Q. On what basis did you make your choice?

5 A. Again, plastic material being a good surface to
adhere to

6 high explosives.

7 Q. Why were you looking for high explosives?

8 A. This is again part of the overall protocol that I
will

9 follow on any crime scene or any bombing matter that I
will go

10 to or any item.

that
detonate;
11 Q. Well, you wanted to know what it was that caused
12 ammonium nitrate, if it was ammonium nitrate, to
13 correct, sir?

14 A. No. My mission was to examine the particular item,
15 determine what explosives and explosive residues were
actually
16 on the surface.

17 Q. You were the auxiliary examiner; correct?

18 A. That would have been the designation for the
examination,
19 yes.

20 Q. And were you telling us that you were just doing
the
21 technical work and that any conclusion drawing was to
be left
22 to the principal examiner?

23 MS. WILKINSON: Objection, your Honor.
Depending on

24 what he's talking about, on the residues or on the type
of
25 bomb. That's two different questions.

11489

Steven Burmeister - Cross

1 THE COURT: Overruled.

2 BY MR. TIGAR:

3 Q. You can answer.

4 A. I make all my determinations as to what chemicals
are

5 present on the particular item. That's my job and
that's my

6 responsibility. No one else makes any chemical
determinations

7 other than myself.

8 Q. My question is: Did you leave to somebody else a
decision

9 as to what the significance of your findings was?

10 A. I'm the one who determines what materials are
actually on

11 the surface of that particular item, the significance
of any of

12 the other materials that are present on it.

13 Q. Do you determine what to test for?

14 A. For the high explosives, is that what --

15 Q. Yes, sir.

16 A. I'm the one who determines what kinds of chemical
analysis

17 will be examined -- will be performed on that
particular item.

18 Q. There are many, many, many kinds of high
explosives;

19 correct?

20 A. Yes.

21 Q. You can't test for all of them; correct?

22 A. That's right.

23 Q. You have to choose; correct?

24 A. Yes.

25 Q. And you did choose, didn't you?

11490

Steven Burmeister - Cross

for in 1 A. It's within the realm of material that we examined
2 the lab, yes.

things to 3 Q. Right. No, sir. You chose -- correct -- which
4 test for; is that right?

we 5 A. It's within the scope of the actual procedures that
6 followed. There's a limited number of items that we

determined 7 actually explore, but these are ones which are

8 within the protocol and procedure that I employ.

Burmeister did. 9 Q. Okay. I'm asking what Special Agent Steven

10 Did you choose what things to test for?

11 A. This is part of the protocol --

you 12 THE COURT: Well, answer that question. Can't

13 just answer the question he's asking you?

choose out 14 THE WITNESS: I don't individually take and

protocol 15 of the entire protocol what items to test for. The

16 will assume a variety of different items, and that's
what the
17 protocol is, to encompass as many different materials
as
18 possible.

19 BY MR. TIGAR:

20 Q. You followed the protocol, didn't you?

21 A. Yes.

22 Q. And the protocol said test for HMX, didn't it?

23 A. The test itself does not specifically say that.

24 Q. Did you test for HMX?

25 A. For this particular item, it's not within the
screen of

11491

Steven Burmeister - Cross

1 particular items.

2 Q. Did you test any of the items that were submitted
to you in
3 connection with this test for HMX?

4 A. Yes.

5 Q. And you know that HMX is what lines the orange
shock tube
6 of Primadet; correct?

7 A. Yes.

8 Q. You testified on direct examination that Primadet
was found

9 in Mr. Nichols' home; correct?

10 A. Yes.

11 Q. Did you ever find any HMX?

12 A. I found HMX on the interior of the Primadet tube.

13 Q. Did you find any in the bomb scene residues?

14 A. No.

15 Q. Now, HMX consists of the -- the kind you had was
the

16 200-millisecond delay No. 8 Primadet; correct?

17 A. I don't know that particular numeric numbers.

18 Q. Okay. You're familiar with what Primadet is;
correct, sir?

19 A. Yes, I am.

20 Q. And you know that it -- it's made in different
delays;

21 correct?

22 A. That, I'm aware of, yes.

23 Q. It's made in different lengths; correct?

24 A. Yes.

25 Q. And the particular kind you had that you found --
was found

11492

Steven Burmeister - Cross

1 in Mr. Nichols' house was 60-foot length; correct?

2 A. That particular number, I'm not sure of without
referring

3 to the actual item itself.

4 Q. All right. I'll find a photograph in a minute,
sir.

5 If -- now, did you also look at Primadet for
6 Mr. Fortier's house -- or from -- that had been
recovered from

7 someone that Mr. Fortier gave it to?

8 A. I don't recall the exact examination.

9 Q. Okay. Showing you now, sir -- thanks to Government
10 counsel -- what's been received in evidence as
Government

11 Exhibit 141. Does that refresh your recollection, sir,
about

12 the Primadet?

13 MS. WILKINSON: Excuse me, your Honor.
Perhaps the

14 marshal could take down the easel. I believe it's
blocking the

15 jury's view.

16 THE COURT: Okay.

17 MR. TIGAR: Thank you, Marshal.

18 THE WITNESS: I can't see the Government
exhibit

19 number, but that's --

20 BY MR. TIGAR:

21 Q. All right. I'll show you the bottom. There it is,
141.

22 Do you see it?

23 A. Yes, I do.

24 Q. All right. Now -- and that's the 60-foot length;
correct?

25 A. Yes.

11493

Steven Burmeister - Cross

1 Q. And it has an "8" on the little tag; correct?

2 A. Yes.

3 Q. So we're talking about 60 foot. And this thing
here that

4 I'm pointing to, that's a blasting cap; correct, sir?

5 A. Blasting cap or detonator, yes.

6 Q. Now, the way this works is that this end that I'm
pointing

7 to down here, you can't see it, that's crimped;
correct?

8 A. Yes.

9 Q. And in its natural state, if you don't handle it,
the HMX

10 is not supposed to come out of there; correct? It's
not

11 supposed to leak out?

12 A. I don't know that for a fact, but that's part of
the

13 crimping, I would assume.

14 Q. Well, on direct examination, you said that you
would not

15 expect that -- any HMX to get out of there because it
was

16 sealed; do you remember saying that?

17 A. Yes.

18 Q. Well, is it true?

19 A. That would assist in allowing it to filter out.
You'd have

20 to vibrate it or something like that in order to get it
to come

21 out.

22 Q. Vibrate?

23 A. Yes.

24 Q. Okay. Now, are you familiar with this Primadet
product? I

25 mean have you read up on it?

11494

Steven Burmeister - Cross

1 A. I'm aware of the chemical materials that's on the
interior

2 of the Primadet surface itself. Product information,
I'm not

3 fully aware of.

4 Q. Do you know that there's a minute quantity of HMX
on that;

5 correct?

6 A. Yes.

7 Q. And are you aware that when this stuff is used,
that the

8 orange shock cord survives?

9 A. I'm not aware of that.

10 Q. Have you spoken in connection with your study of
Primadet

11 that you told us about on direct examination to any
12 representatives of the Ensign Bickford Company that
13 manufactures this product?

14 A. No.

15 Q. And you've never read any of their product
literature; is

16 that right?

17 A. Oh, I've read their product literature, but I
haven't

18 spoken to any of the representatives.

19 Q. When you read the product literature, were you
looking to

20 see whether or not portions of this would survive a
blast?

21 A. No, I didn't look for that.

22 Q. As a person interested in examining residue from
crime

23 scenes, is it important to you to know what sorts of
things

24 survive and don't survive blast events?

25 A. Yes.

11495

Steven Burmeister – Cross

1 Q. Did you find any orange plastic at the crime scene?

of 2 A. I personally don't recall looking for orange pieces
3 plastic.

4 Q. Did -- was any orange plastic submitted to you?

5 A. I don't recall seeing any pieces of orange plastic.

6 Q. So we have no HMX -- correct -- at the crime scene?

7 A. None that I detected.

8 Q. Uh-huh. And we have no orange plastic; correct?

I never 9 A. I don't know what was submitted as far as plastic.
10 received any orange plastic.

11 Q. You never saw any orange plastic, okay.

mechanisms that 12 Now, did you find any pieces of timing
13 you tested for residues?

mechanisms. 14 A. I don't know what you're referring to as timing

15 Q. Bomb -- bomb-type timing mechanisms?

looking 16 A. Again, I don't know. I wouldn't -- I wouldn't be
17 at material that's specifically timing mechanism.

of the 18 Q. Okay. Did you find any pieces of leftover pieces
and 19 metal, metal fragments consistent with blasting caps
20 detonation cord?

were 21 A. Again, I don't recall any particular pieces that
22 designated that way.

pieces of 23 Q. Now, did you participate in the decision to send
24 plastic to Smurfit?
25 A. No.

11496

Steven Burmeister - Cross

Agent 1 Q. Now, I want to ask you, sir, now about the chain of
2 custody. Did you review the testimony of Mr. Kelly and
Government 3 Wilson about how this matter -- how this item,
4 Exhibit -- if I can retrieve it from you.

5 These are the bags in which it was?

6 A. Yes.

testimony of 7 Q. Government Exhibit 664: Did you review the
8 those agents as to how and where it was found?

9 A. No.

long 10 Q. Do you know -- Mr. Kelly has worked for you for a
11 time; correct?

only 12 A. He's technically in the strata of the FBI. He has
13 worked with me since January of this year when I
assumed the

not 14 acting unit chief position. Prior to that time, he did
15 work for me.

long, 16 Q. He worked with you. He's worked with you for how

17 sir?

with me. 18 A. I would say for the last three years he's worked

19 Q. Now, when you retrieve things -- when one retrieves
20 something in the field, okay, that's going to be tested
for

21 residue, it is important to follow retrieval
procedures;

22 correct?

23 A. There are -- there are procedures in place for
collecting

24 particular items.

25 Q. And at this bombing crime scene, the procedure was
that the

11497

Steven Burmeister - Cross

1 item was supposed to be either marked on a map or
photographed

2 in place; correct?

3 A. I did not designate any procedures like that, no.

4 Q. Do you know whether those are the proper
procedures?

5 A. I don't know what the exact procedures that were
actually

6 employed.

7 Q. My question is: Do you know whether it's proper to

mark it

8 on a map or photograph it in place if you recover
something at

9 a bomb crime scene, sir?

10 A. There is various techniques of doing it, one of
which would

11 be to take a map and mark on a map where a particular
item is.

12 It's not always the case.

13 Q. How about photography? Is it important to
photograph

14 things in place?

15 A. It's not always the procedure to photograph things
in

16 place.

17 Q. Have you looked at photographs of 664, where Mr.
Kelly said

18 he found it?

19 A. Yes.

20 Q. And does that photograph help you in any way in
your

21 testimony that you're presenting today?

22 A. The only way that it would help me would be the
actual

23 configuration at which it was recovered.

24 Q. And what's helpful about that, sir?

25 A. The particular surface of the particular item was
recovered

Steven Burmeister - Cross

side 1 in a mode where it was in a protected mode. The wooden
2 would have been protected from the elements.

the 3 Q. Now, when you say "would have been protected from
4 elements," are you assuming that the item came to rest
there at 5 shortly after 9:02 a.m. on the 19th and remained in
exactly the 6 same position until 10:30 a.m. on the 21st?

7 A. I don't know.

8 Q. Well, you told us it had been protected from the
elements.

9 The picture of it shows that it's lying with this side,
the 10 color side, up -- correct -- and that the red is lying
on a 11 piece of metal? Do you remember that picture?

12 A. I vaguely recall that configuration, yes.

13 Q. Showing you now page 10 of what's been received in
evidence 14 as Defense Exhibit E5.

15 Do you remember seeing that picture before?

I could 16 A. If you can back off from the magnifications so that
17 see the entire photo.

18 Q. Yes, sir. There you are.

19 A. Yes, that photo looks familiar.

the
20 Q. Okay. And do you remember that as a photo taken at
21 crime scene?
22 A. I know it was taken at the crime scene, yes.
23 Q. And do you know who took it?
24 A. No.
25 Q. Now, at -- were you walking around the crime scene
on the

11499

Steven Burmeister - Cross

1 21st?
2 A. Yes, I was.
3 Q. And you were walking around it on the 20th;
correct?
4 A. Yes.
5 Q. Did you see the pink painted circles that were on
the
6 ground on the 20th and 21st?
7 A. I saw them, yes.
8 Q. And did you know how those were made?
9 A. No.
10 Q. Did you have some understanding for your
investigative
11 purposes as to how they were made?
12 A. No.
13 Q. Do you see what appears to be pink paint on the

ground

14 here, where I'm pointing?

15 A. I see a pink area that you're referring to.

16 Q. Yes. Now, does Government Exhibit 664 have any
pink on it?

17 A. My recollection of 664 has an area on the painted
side that

18 would be of a pink color.

19 Q. All right. Right here; correct?

20 A. Yes.

21 Q. Is that correct? Okay.

22 Now, 664, it's fair to say -- excuse me --
it's what

23 used to be a regular piece of plywood; correct?

24 A. It was much thicker than that.

25 Q. As it started out, it was a thick piece. And it's
fairly

11500

Steven Burmeister - Cross

1 light; correct? It's light.

2 A. I'd agree with you, it's a light object.

3 Q. In a -- is it light enough that it could be picked
up and

4 turned over in a windstorm?

5 A. I don't know.

6 Q. Okay. But we could lie it on the ground and blow
on it or

7 run a fan; we could find out, couldn't we?

I'm 8 A. You could set up a test scenario to demonstrate it,

9 sure.

10 Q. We could do it.

whether 11 Now, is there a practice with respect to

be moved 12 items -- if they are going to be photographed, should

13 before they're photographed?

says one 14 A. There's no designated procedure written down that

15 way or the other that I'm aware of.

think it's 16 Q. All right. Well, from your standpoint, do you

them and 17 better to pick them up and put them in a bag and move

take a 18 then try to remember where you move them back, or to

19 picture of them right where they were?

place 20 A. It's my opinion that I would photograph the item in

that type 21 in its original form. That's the best way to conduct

22 of recovery.

should 23 Q. And then the next thing is that of course the item

24 be documented all the way through; correct?

item. 25 A. There should be documentation with that particular

11501

Steven Burmeister - Cross

1 Q. Now, you say that you received this item at the
warehouse;

2 is that correct?

3 A. No.

4 Q. Who received it? Where did you first see it?

5 A. First time I saw the item, it was in a collection
of other

6 items; but it was at the crime scene itself.

7 Q. And at that point did somebody give it to you?

8 A. Yes.

9 Q. So you received -- what did you do with it?

10 A. I took custody of the items and then transported
those

11 items to the Evidence Control Center in Oklahoma City.

12 Q. So it is not the case that Agent Wilson took it to
the

13 Evidence Control Center and gave it to you there? That
didn't

14 happen?

15 A. My recollection is that I received custody of these
items

16 at the crime scene.

17 Q. My question is: It is not the case, sir, that
Agent Wilson

18 gave it to you at the Evidence Control Center?

Center. 19 A. He did not give it to me at the Evidence Control

as you 20 Q. Now, when you got to the Evidence Control Center,

21 remember it, you gave the items to whom, Mr. Elliott,

22 Mr. Norman?

23 A. No.

24 Q. To whom?

evidence 25 A. I signed it in to the custodian that was at the

11502

Steven Burmeister - Cross

1 center, and that was a June Buckner.

opened up 2 Q. And then the next time you saw it was when you

3 your package; correct?

4 A. The next time I saw it was when I was at the FBI

5 Laboratory, and I received it from Mr. Mills.

box in 6 Q. Now, did Mr. -- did you get it from Mr. Mills in a

7 which it had been shipped?

in, and 8 A. I received it in a envelope that it was packaged

9 then packaged in plastic bags.

Government 10 Q. Let me show you now what's been marked as

11 Exhibit E132. Is that what arrived with the package?

12 MS. WILKINSON: Excuse me, he said Government
exhibit
13 marked 1 --
14 MR. TIGAR: I'm sorry, Defense Exhibit E132.
15 MS. WILKINSON: Could I take a look at that?
16 MR. TIGAR: Of course.
17 MS. WILKINSON: You're talking about this
entire --
18 MR. TIGAR: I'm going to show it to him, yes.
19 MS. WILKINSON: This is different --
20 MR. TIGAR: We'll find out.
21 MS. WILKINSON: Your Honor, I'm going to
object to him
22 showing this item. He's including two different
documents.
23 THE COURT: Let the witness tell us what it
is.
24 MR. TIGAR: Your Honor, I object to the
sidebar. I'm
25 going to show the witness an item received from the
Government,

11503

Steven Burmeister - Cross

1 and I'm going to ask the witness what that is.
2 THE COURT: You may do that.
3 BY MR. TIGAR:
4 Q. Sir, this consists of a number of pages. And I
just want

got the 5 to ask you: Is page 1 something that you got when you
6 item in from Mr. Mills.

7 A. No.

being 8 Q. Okay. Then -- so -- do you recognize this item as
9 any part of your records?

10 A. I would not keep this in my records, no.

how it 11 Q. Okay. And do you have any personal knowledge as to
12 was made?

at the 13 A. The front item of this was filled out at the time,

other 14 Evidence Control Center. Aside from that, I have no
15 information where it was --

Center; is 16 Q. So page 1 was filled out at the Evidence Control
17 that right?

18 A. Yes.

19 MR. TIGAR: We offer page 1. E132.

20 The Government may withdraw the other.

21 THE COURT: Well, these are loose pages.

22 MR. TIGAR: Yes, your Honor.

we 23 MS. WILKINSON: He's only offering page 1. If
no 24 could just mark it as a separate exhibit, I would have
25 objection.

11504

Steven Burmeister - Cross

1 MR. TIGAR: Page 1 is what he has in front of
him.

2 MS. WILKINSON: I'm sorry. I thought he was
showing
3 me what he was offering.

4 MR. TIGAR: I'm showing the other pages of the
5 exhibit.

6 THE COURT: Let's take a look at what's being
offered.

7 MR. TIGAR: Uh-huh.

8 MS. WILKINSON: Your Honor, I'm going to
object to
9 this. I don't think this was the page that Mr.
Burmeister said

10 was filled out. I think it was the first page with the
11 signature on it.

12 THE COURT: I heard him say it was filled out
at the
13 Evidence Control Center.

14 Take a look at it again.

15 MR. TIGAR: Yes, I'm sorry, sir --

16 THE WITNESS: There is some more to --

17 MR. TIGAR: -- what was was, and what wasn't
wasn't.

18 BY MR. TIGAR:

That 19 Q. Was this filled out at the Evidence Control Center:
20 page I'm showing you here now?
to it. 21 A. That's my understanding this was, but there's more
what 22 Q. All right. Well, then, let's took through and see
23 more there is to it.
24 A. Okay. I'm familiar with this particular page.
correct? 25 Q. All right. That's a part of the chain of custody;

11505

Steven Burmeister - Cross

1 A. Right.
2 Q. And then page 3: Part of the chain of custody?
3 A. Uh-huh.
4 Q. And page 4: Part of the chain of custody; right?
5 And then these remaining pages are part of a
search 6 log. Does that look like what that is?
7 A. It's information that I would not receive.
8 MR. TIGAR: All right, then. So, your Honor,
we would 9 offer these four pages.
10 THE COURT: Perhaps we should staple them or
something 11 to make them --

12 MR. TIGAR: Yes, I will. I could not do that
until I

13 found out --

14 THE COURT: I understand.

15 MS. WILKINSON: Your Honor, may I just voir
dire?

16 THE COURT: You may.

17 VOIR DIRE EXAMINATION

18 BY MS. WILKINSON:

19 Q. Agent Burmeister, you said you're familiar with
this page.

20 Is that the page with your signature on it?

21 A. Yes.

22 Q. Can you verify any of the other signatures on this
page?

23 A. No, only mine.

24 Q. And what about the signatures on the remaining
pages?

25 A. My signature appears on the other pages.

11506

Steven Burmeister - Voir Dire

1 Q. Okay. Agent Burmeister, is this document the
complete

2 chain of custody for Government's Exhibit 664?

3 A. No. I don't know what the -- I'm just aware of the
pages

4 themselves from my signature.

5 Q. Do you keep a chain of custody for exhibits when
they come

6 into the laboratory for your review?

7 A. Yes.

8 Q. And did you provide that chain of custody in your
notes?

9 A. Yes.

10 Q. And would that complete the chain of custody for
11 Government's Exhibit 664?

12 A. Yes.

13 MS. WILKINSON: Your Honor, we would object,
unless we

14 offer those other pages that show the complete chain of
15 custody.

16 MR. TIGAR: I have no objection to that, your
Honor.

17 THE COURT: All right.

18 MS. WILKINSON: Thank you.

19 THE COURT: Well, where are they?

20 MS. WILKINSON: I'll pull them out.

21 MR. TIGAR: In the meantime, I ask Miss
Hasfjord to

22 staple what we have.

23 THE COURT: All right. We'll staple this, and
this

24 will be E132.

25 MR. TIGAR: Yes, your Honor.

Steven Burmeister - Voir Dire

1 THE COURT: And it's being received subject to
the

2 addition of --

3 MR. TIGAR: -- the other material.

4 THE COURT: Which we will call a Government
exhibit,

5 and they will relate.

6 MR. TIGAR: Right.

7 THE COURT: Go ahead. Well, I guess -- can
somebody

8 else look at this?

9 MS. WILKINSON: I've got it right here, your
Honor.

10 I'm sorry.

11 THE COURT: Well, we can come back to that on
12 redirect. Let's continue with the examination.

13 MR. TIGAR: Yes, your Honor. I only want to
ask him

14 two questions about the front page.

15 THE COURT: All right.

16 MR. TIGAR: It's been received. I can put it
up.

17 CROSS-EXAMINATION CONTINUED

18 BY MR. TIGAR:

19 Q. Mr. Burmeister, showing you now what's been
received as

and then 20 132, you note that Items 1 through 5 and 7 through 15,
21 there's a note here. Do you know what that means?
22 A. No.
Shelf 2"; 23 Q. It says, "Item 6 stored at Room A, Row 1, Unit B,
24 correct?
25 A. That's what it looks like.

11508

Steven Burmeister - Cross

1 Q. Now, Item 6 is what's now been received as
Government's 2 664; correct?
3 A. I'm not sure how -- what that Item 6 designation
calls for.
4 Q. Item 6 is Item 06 off the evidence log; is that
right?
5 A. I'd have to see the evidence log to demonstrate
that.
6 THE COURT: There's no dispute about that, is
there?
7 MS. WILKINSON: No, your Honor. I believe
it's down 8 further on the page.
9 THE COURT: You can accept: 06 is the same as
Item 6.
10 BY MR. TIGAR:
11 Q. Do you know why Item 6 is stored in a different

place?

12 That's the only question.

13 A. No.

14 Q. Now, in addition to concerns about what happens at
the

15 crime scene, chain of custody is also important because
it can

16 affect the significance of your findings; correct?

17 A. Yes.

18 Q. That is, if somebody finds an object and brings it
to you

19 and says, Well, I found this six months ago but I
really don't

20 know where it's been since then, would that cause you
some

21 concerns?

22 A. If someone doesn't know how they packaged it and
stored it,

23 that would be a variable.

24 Q. It's a variable; correct?

25 A. Uh-huh.

11509

Steven Burmeister – Cross

1 Q. And that can affect the reliability of the
conclusions that

2 you draw in terms of the particular case you're working
on;

3 correct?

you're 4 A. It would depend on the particular finding that
5 discussing.
6 Q. Now, you are -- you have some experience in the
7 investigation of arson scenes; correct?
8 A. Yes.
it's 9 Q. And you are aware that in an arson scene -- that
10 necessary to protect items of physical evidence that
may have 11 some significance, evidentiary significance; correct?
12 A. There's procedures to take for that, yes.
physical 13 Q. Yes. And in terms of investigating arson scenes,
moved; 14 evidence should be thoroughly documented before it's
15 correct?
16 A. Documentation is part of the procedures.
Guide to 17 Q. No, my -- well, are you familiar with the NFPA
18 Fire and Explosion Investigations?
19 A. Yes.
to the 20 Q. And do you accept that as an authority with respect
21 investigation of arson scenes?
22 A. It's a guide tool. I don't know if it's the actual
gospel 23 authority for it. It's a tool that people can use.
24 Q. Sir, we're not talking about the Gospels. No

blasphemy

25 meant. We're talking about the investigation of arson
scenes.

11510

Steven Burmeister - Cross

1 Do you accept this as authoritative with respect to the
2 investigation of arson scenes?

3 A. It's one of many items that's used as a guide tool
for
4 people to use when they go to investigate incidents
with
5 accelerant-type materials.

6 Q. And do -- my question, sir: Do you, Steven
Burmeister,
7 accept it as authoritative.

8 A. I would of numerous documents, I would accept it as
a
9 document to refer to if I want to find various
information.

10 Q. And there are similarities, are there not, between
the
11 investigation of arson crime scenes and bombing crime
scenes,
12 techniques?

13 A. Some of the techniques are used.

14 Q. And that -- and that's because the search for
accelerants

15 and residues is a feature that's common to the
investigation of

16 bombing scenes and arson scenes; correct, sir?

17 A. There are some similarities.

18 Q. Is one of the those similarities that both involve
the
19 search for accelerants and residues?

20 A. No. The only -- if I can explain what I mean by
21 "similarities." The similarities are really in the
area that

22 some accelerant materials have an ability to be
vaporized and

23 penetrate, and some high explosives have the ability to
24 penetrate through various packaging items. That's why
it would

25 recommend some packaging methods. That's really the
difference

11511

Steven Burmeister - Cross

1 between the two investigations.

2 Q. Come back to that.

3 Do you agree with me, then, that physical
evidence

4 should be thoroughly documented before it's moved; do
you agree

5 with that?

6 A. Yes.

7 Q. Do you agree with me that plastic bags are not the
best way

8 to store evidence that may contain or have accelerant
residues?

9 A. What type of plastic bags do you refer to?

10 Q. Ordinary plastic bags, Ziploc.

11 A. Ordinary plastic bags are not recommended for
12 accelerant-type evidence.

13 Q. Now, the advantages of plastic bags are that
they're
14 readily available, they're economical, and you can look
at the
15 evidence without opening the bag; correct?

16 A. Yes.

17 Q. The disadvantages are that they're susceptible to
easy
18 damage, such as by tearing and penetration, resulting
in the
19 contamination of the physical evidence in them;
correct?

20 A. Ordinary plastic bags, yes.

21 Q. And by "ordinary" -- Now, does the FBI use ordinary
plastic
22 bags, or unordinary ones?

23 A. These are evidence bags that we utilize in the FBI
24 Laboratory. I wouldn't designate them as ordinary
plastic
25 bags, since --

on it. 1 Q. I'm holding up now 664B, which has a zip-type top

could buy at 2 What is the difference between this and a Ziploc I

3 the store?

different. 4 A. It's the thickness of the bag is somewhat

5 Q. Okay. This is thicker?

6 A. Yes.

I buy at 7 Q. Well, what's the difference between this and a bag

8 the store marked "freezer bag"?

9 A. That, I don't know.

I could 10 Q. Okay. What's the difference between this and a bag

inside 11 buy advertised on television that shows a piece of meat

12 and an animal that can't find it?

13 A. I don't know that type of bag.

they can 14 Q. Okay. Plastic bags have this characteristic that

penetrated by 15 be penetrated by certain evidence. They can't be

16 ammonium nitrate; correct?

penetrate 17 A. Plastic bags -- right -- ammonium nitrate doesn't

18 the plastic bags.

19 Q. And that's because ammonium nitrate is not organic;

20 correct?

21 A. That's correct, yes.

22 Q. Now, certain hydrocarbons can penetrate; correct?

23 A. Hydrocarbons can penetrate certain types of plastic bags.

24 Q. Can they penetrate polyethylene plastic bags like this?

25 A. Yes.

11513

Steven Burmeister - Cross

1 Q. And do hydrocarbons include fuel oil?

2 A. Yes.

3 Q. And nitromethane?

4 A. Yes.

5 Q. And gasoline?

6 A. Yes.

7 Q. Hydrocarbons are petroleum. That's what most hydrocarbons

8 are; right --

9 A. Yes.

10 Q. -- that we see in common use? Okay.

11 And can HMX penetrate plastic bags?

12 A. At a certain time period, it will; but its ability to

13 penetrate plastic bags -- the chemical configuration of it will

14 restrict it from penetrating very quickly. It's certain

that will 15 explosives that will go quick. It's one of the ones

16 go on a lesser scale.

17 Q. What happens if you put a whole bunch of plastic
bags in

18 the same box? Things can cross. Hydrocarbons that
might be

19 there can cross from one sample to another; correct?

20 A. If it's in the improper plastic bag, it could
occur, yes.

21 Q. Did you find any hydrocarbons or hydrocarbons on
664?

22 A. I didn't look for any.

23 Q. Were you aware that hydrocarbons -- that there was
a theory

24 that hydrocarbons might have been used as a part of
this bomb?

25 A. At what particular point are you referring to?

11514

Steven Burmeister - Cross

1 Q. At the time you were doing your tests.

2 A. That's certainly one of the many types of materials
that

3 could be mixed with various materials. A finding of
ammonium

4 nitrate, looking for a fuel oil, that would be one
particular

5 fuel that you could look for.

You had 6 Q. Okay. Well, now, you say at one particular time.
wanted; 7 the opportunity to test 664 as many times as you
8 correct?

9 A. I could have requested it as many times as I liked,
yes.

10 Q. And, for instance, in -- on July the 21st, you
could have 11 requested it; correct --

12 A. Yes.

13 Q. -- 1995?

14 A. Yes.

15 Q. And were you aware that prior to July of 1995,
there had 16 been a theory that this was an ANFO device?

17 A. I'm not aware of that particular theory in place.

18 Q. Well, were you aware that your principal examiner
put out a 19 theory that this was an ANFO device?

20 A. I don't know whether at that particular time frame
anything 21 had been written down about that by any particular
individuals 22 at that time frame.

23 Q. Well, you were the auxiliary examiner; correct?

24 A. Yes.

25 Q. And as the auxiliary examiner, you have the right
to look

11515

Steven Burmeister - Cross

1 at this and to test it; correct?

2 A. Yes.

3 Q. Are you aware that at some period of time, when you
still

4 had access to 664, your principal examiner wrote down a
5 conclusion that this was an ANFO device?

6 A. I'm not aware of that.

7 Q. Are you telling this jury that you don't know --
well, who

8 is your principal examiner?

9 A. The principal examiner on this particular matter
was

10 Special Agent Dave Williams.

11 Q. Are you telling this jury that you don't know that
12 Mr. Williams expressed a conclusion in a written report
that

13 this was an ANFO device? Is that what you're saying?

14 A. Well, you have to put a time frame on it.

15 Q. All right. Prior to August 1, 1995.

16 A. I'm not sure of the exact date that I had learned
that

17 something had been written down. I'm not sure of the
exact

18 date.

19 Q. You're aware that at sometime that report was
written;

20 correct?

21 A. Again, I'm not sure of the exact written format of
that
22 particular document. I know something had been written
down.

23 When it had been written down, I'm not aware of it.

24 Q. Now, let me see if I could refresh your
recollection, sir.

25 Showing you this --

11516

Steven Burmeister - Cross

1 MS. WILKINSON: Excuse me, could I just --

2 MR. TIGAR: Uh-huh.

3 BY MR. TIGAR:

4 Q. I'm going to show you now this, and just to refresh
your
5 recollection. You see the date, sir?

6 A. Yes.

7 Q. Okay. Do you see that?

8 A. I see what you're pointing to.

9 Q. Yes. Okay. Does that refresh your recollection as
to when
10 somebody at a time when you still had control or access
to 664
11 expressed a conclusion?

12 A. No.

reached 13 Q. Do you remember being questioned about a conclusion

14 by Mr. Williams that this was an ANFO device?

15 A. By whom?

16 Q. By anyone connected with the Department of Justice.

17 A. There were individuals who did question me about
that, yes.

18 Q. And did they ask you -- did they inform you that

19 Mr. Williams had reached a certain conclusion?

20 MS. WILKINSON: Objection, your Honor.

21 THE COURT: Sustained.

22 BY MR. TIGAR:

23 Q. When you got to the crime scene, sir, on the 20th,
was the

24 possibility that this device was made of ammonium
nitrate and

25 fuel oil one that you were considering?

11517

Steven Burmeister - Cross

1 A. I'm not sure if I considered it. I'm sure that it
was of

2 the entire grouping of materials that I would have
considered.

3 Whether I was specifically focusing on that particular
one, I

4 doubt it, since I was staying open to whatever was
available.

5 Q. I didn't ask you about a conclusion, sir. Was this

one of

6 the options, one of the items you thought could be?

7 A. Any large bombing crime scene --

8 THE COURT: Just answer the question, will
you.

9 THE WITNESS: It could be. I don't remember
whether I

10 was specifically focusing on that particular material.

11 BY MR. TIGAR:

12 Q. You're a scientist; right?

13 A. Yes.

14 Q. And you don't want to leap to conclusions; right?

15 A. Absolutely.

16 Q. Okay. And so we got to be careful; right?

17 A. Yes.

18 Q. Let's start. Ammonium nitrate: How many billion
pounds of

19 ammonium nitrate are sold in America every year?

20 A. I don't know.

21 Q. Do you know Paul Rydlund?

22 A. I'm aware of the name.

23 Q. Do you know that he -- do you accept him as an
expert in

24 the field of ammonium nitrate and fuel oil
combinations?

25 A. I would accept him as an expert in that particular
field,

11518

Steven Burmeister - Cross

1 yes.

2 Q. You know that he holds a master's degree that has
to do

3 with timing devices or blast delays? Did you know
about that?

4 A. No.

5 Q. Do you know that he held a patent?

6 A. I'm not aware of that particular patent.

7 Q. But you know that he's an expert -- correct -- in
the field

8 of ammonium nitrate and fuel oil; correct?

9 A. Yes.

10 Q. And ammonium nitrate, you know is used for
fertilizer;

11 correct?

12 A. Yes.

13 Q. How many pounds a year are sold and used for
fertilizer?

14 A. I have no idea.

15 Q. Do you know how it's sold, in what form?

16 A. I'm not an expert in the packaging of ammonium
nitrate.

17 Q. You testified on direct examination that ammonium
nitrate

18 prills would not come out of a sealed fertilizer bag.
Do you

19 remember that?

20 A. Yes.

21 Q. How do you know?

22 A. I have seen bags of ammonium nitrate in a prill
form in
withhold

23 bags, and I've seen how they -- they would withheld --

24 the particular material inside.

25 Q. And do you know how those bags are filled?

11519

Steven Burmeister - Cross

1 A. No.

2 Q. Do you know whether they're sewed or heat-sealed?

3 A. The ones that I have seen were heat-sealed.

4 Q. And they're made of plastic or paper and plastic?

5 A. I have seen some that were in a combination of both
with a
plastic

6 plastic liner on the interior and some which were

7 overall.

8 Q. All right. And the ones that are paper and plastic
in the
sealed?

9 interior: Is it your testimony that those are heat-

10 A. The ones that I saw had a heat-sealed interior
plastic

11 lining.

12 Q. And did you have any opinion as to how the heat

seal could

13 be applied through the paper?

14 A. I really don't know how that would be applied.

back

15 Q. Did you -- had you looked at any pictures of the

the

16 storage room of the Kansas co-op, looked at pictures of

17 floor there?

18 A. No.

show you

19 Q. So did anybody show you pictures and did anybody

20 the testimony or talk to you about the testimony of

have to

21 Mr. Schlender about how their floor gets dirty and they

22 sweep it out?

23 A. No.

which

24 Q. Have you ever watched any manufacturing process in

commerce?

25 ammonium nitrate bags are filled to be shipped in

11520

Steven Burmeister - Cross

1 A. No.

that an

2 Q. Well, then on what basis are you giving an opinion

there's

3 ammonium nitrate bag purchased at a feed store -- that

4 no way the ammonium nitrate could leak out of it?

and
do not
5 A. The only experience is looking at bags themselves
6 seeing how they're heat-sealed and seeing that prills
7 penetrate outside of the bag.

8 Q. And -- but did you -- where did you do that?

Canada. I
9 A. This was several years ago when I visited ICI in
10 saw plastic bags that were filled up there and looking
at the
11 construction of those particular bags.

12 Q. Now, these were all-plastic bags?

13 A. Some were paper and some were plastic.

14 Q. So that's the basis for your opinion; right?

15 A. Yes.

pictures
16 Q. Okay. You didn't look -- you didn't look at the
17 of an actual place where these things are stored;
correct? In

18 a farm supply store -- you never did that?

19 A. No.

is sold
20 Q. Well, you're not aware of how much ammonium nitrate
21 all over the country -- correct -- and we've
established that?

22 A. Right.

looked
23 Q. Now, you also -- one of the possibilities that you
24 at -- that you thought this bomb might have been a urea
nitrate

25 bomb. That was a possibility; correct?

11521

Steven Burmeister - Cross

1 A. It certainly was a possibility.

between

2 Q. Now, is there a way that -- is there a similarity

devices?

3 urea nitrate and ammonium nitrate improvised explosive

of its

4 A. There are some chemical similarities in the sense

5 detonation abilities and speeds.

ammonium

6 Q. Now, is it possible to -- in testing to mistake an

7 nitrate for a urea nitrate?

8 A. Using what method?

around

9 Q. Well, is it possible to make up a sample containing
10 ammonium nitrate and things that you might find just

the

11 your house and have that show up as a urea nitrate on

12 machine, on the testing machine?

13 A. Again, you have to tell me which instrument you're

14 referring to.

which you

15 Q. Yes. Well, did you ever have an experiment in

nitrate

16 tried to see whether or not a machine reading for urea

be -- 17 was actually urea nitrate, or whether the machine could
urea 18 could read out a urea nitrate even though it wasn't a
19 nitrate sample? You've done that; right?
20 A. Yes.
21 Q. And how did you do it?
22 A. Was using an instrument called a "solids probe mass
particular case; 23 spectrometer," one which was not used in this
24 but that's the particular instrument that was used to
make that 25 type of a finding.

11522

Steven Burmeister - Cross

nitrate 1 Q. Uh-huh. And what you did was you had some ammonium
2 at your house?
3 A. No.
there? 4 Q. Where did you get the ammonium nitrate to use
5 A. It was from a test vial.
in 6 Q. All right. And was that an ammonium nitrate bought
7 commerce or at a hardware store?
8 A. I don't know where the FBI purchased it from.
9 Q. And then something was added to it; correct?

10 A. Yes.

11 Q. What was added to it?

12 A. It was urea, prills of urea.

13 Q. All right. And didn't you and Mr. Whitehurst add
something

14 else?

15 MS. WILKINSON: Objection, your Honor.

16 THE COURT: Well, the objection is overruled.

17 BY MR. TIGAR:

18 Q. Didn't you and Mr. Whitehurst add something else to
the

19 sample?

20 A. No.

21 Q. Didn't you have a test in which you and Mr.
Whitehurst

22 mixed up some ammonium nitrate and something else that
you and

23 Mr. Whitehurst, or one of you, had provided to see if
you could

24 make the machine read out urea nitrate?

25 A. No. The only mixture was the one that I made with
ammonium

11523

Steven Burmeister - Cross

1 nitrate and urea.

2 Q. Is it your testimony, sir, that you never
participated in

into a 3 an experiment in which you or Mr. Whitehurst urinated
4 beaker, reduced it down, and added it to ammonium
nitrate and 5 got a machine reading on it?

6 A. The urine study that you're referring to was never
one in 7 which ammonium nitrate was added to the urine. It was
flat out 8 extracts of urine were examined using the solids probe
mass 9 spectrometer. There was nothing added to the urine.

10 Q. And that read out urea nitrate?

11 A. The results were the presence of urea and nitric
acid, 12 which is consistent with a sample of urea nitrate
placed into 13 that particular instrument.

14 Q. Is it your testimony, sir, that you never did an
experiment 15 involving urine and ammonium nitrate?

16 A. There were no experiments where urine and ammonium
nitrate 17 were added together.

18 Q. Is it your testimony, sir, that you never did an
experiment 19 involving urine and ammonium nitrate?

20 A. Together?

21 Q. No.

22 A. Separate?

23 Q. Separately.

24 A. The test was one of which urine was tested and then
the
25 combination of ammonium nitrate and urine, two separate
ones.

11524

Steven Burmeister - Cross

1 Q. Ammonium nitrate and urine?

2 A. I'm sorry. Now you got me fouled up. It's
ammonium
3 nitrate and urea mixed together was one test. The
other test
4 was the urine dried down. So there were two separate.

5 Q. And what was the purpose of that?

6 MS. WILKINSON: Objection, your Honor.

7 THE COURT: Overruled.

8 BY MR. TIGAR:

9 Q. What was the purpose of doing that?

10 A. This was -- the purpose of this entire test was in
the
11 World Trade Center bombing case. We were looking at
various
12 articles of clothing where extracts were removed from
the
13 clothing. These were invisible residues. And based on
those
14 invisible residues, we were getting findings of the
presence of

15 urea and nitric acids, using the solids probe mass
16 spectrometer. The testing was done in order to find
out
17 whether that particular instrument could receive other
samples
18 and still produce the same type of a signal.

19 Q. Now, we've talked now about ammonium nitrate.
We've talked
20 about some of these high explosives. You -- did you
ever test
21 664 to see if any fuel oil residues were present?

22 A. No.

23 Q. Why not?

24 A. I made a determination early on that the samples
themselves
25 would not be tested for any type of hydrocarbon
material based

11525

Steven Burmeister - Cross

1 on the location of that particular -- of items removed
from
2 that particular parking lot area. These were items
that were
3 potentially exposed to hydrocarbons within the air, so
a
4 finding would not be of any significance.

5 Q. Did you make -- did you test anything that was
found away
6 from the parking lot for hydrocarbons?

7 A. Nothing from that entire crime scene was tested for
8 hydrocarbons.

just in

9 Q. Now, the blast center was in the parking pullout
10 front of the Murrah Building; correct?

11 A. Yes.

from

12 Q. And this Item 664 was found a hundred-and-some feet
13 the blast center; correct?

14 A. I don't know the exact distances.

15 Q. A number of feet; correct?

towards

16 Now, if you paced off the same number of feet
17 the Murrah Building, you'd be inside the building;

correct?

18 A. That, I'm not sure.

evidence as

19 Q. I'm going to show you what's been received in

that you

20 Government 940. The truck was parked -- the crater

Murrah

21 saw was right here -- sort of front and center of the

22 Building on N.W. 5th; correct?

23 A. Yes.

correct?

24 Q. 664 was found over here, by the Athenian Building;

25 A. In that general area, yes.

Steven Burmeister - Cross

1 Q. So if we paced off the same number of feet, we'd be
into
2 the Murrah Building; correct?

3 THE COURT: I'm not sure I understand "the
same number
4 of feet."

5 MR. TIGAR: The same number of feet from the
crater,
6 your Honor, but taking a different direction.

7 THE COURT: All right.

8 BY MR. TIGAR:

9 Q. Taking the truck as the center point, we'd be
within the
10 Murrah Building?

11 A. Well, if I measure it off, myself, with my fingers,
I'm
12 outside the Murrah Building.

13 Q. So that debris that was inside the Murrah Building
would be
14 closer to the center of the blast than 664 was found;
is that
15 correct?

16 A. Yes.

17 THE COURT: Is this an interrupting point? We
ought
18 to take the recess.

19 MR. TIGAR: Yes, your Honor, thank you.

20 THE COURT: All right. You may step down.
21 And we're going to take our usual morning
break,
22 members of the jury; and of course this week, like all
other
23 weeks and all other days of trial, I must again caution
you to
24 keep open minds, avoid discussion about the case or any
aspect
25 of it among yourselves and with others, and continue to
avoid

11527

1 anything outside of our evidence that could influence
your
2 decision in the case.

3 You're excused now, 20 minutes.

4 (Jury out at 10:23 a.m.)

5 THE COURT: All right. We're in recess.

6 (Recess at 10:24 a.m.)

7 (Reconvened at 10:44 a.m.)

8 THE COURT: Please be seated.

9 MR. MACKEY: May we approach?

10 THE COURT: Yes.

11 (At the bench:)

12 (Bench Conference 99B2 is not herein transcribed by
court

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

14

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17

18

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21

22

23

24

25

11531

1 (In open court:)

2 THE COURT: Okay.

3 (Jury in at 10:46 a.m.)

4 THE COURT: Please resume the stand, Agent
Burmeister.

5 MR. TIGAR: Excuse me, your Honor.

6 BY MR. TIGAR:

7 Q. Mr. Burmeister, before coming to court today, did
you

8 participate in any moots?

9 A. Years ago. Several years ago.

10 Q. And that was to help you to become familiar with
what it

11 means to testify; correct?

12 A. That was -- that was one aspect of the entire
process.

13 Q. And that is a part of your training as an FBI agent
who may

14 be giving testimony in court, the moot?

15 A. It's part of the training process, yes.

16 Q. And then you met with Government counsel to discuss
the

17 basis of your testimony; correct?

18 A. Again, years later.

19 Q. Yes, of course. Years later.

20 A. Yes.

21 Q. Before coming here today, you've discussed it with
22 Government counsel; correct?

23 A. Yes.

24 Q. And you're aware that there are certain guidelines
that

25 you're supposed to follow while you're testifying;
correct?

11532

Steven Burmeister - Cross

1 A. There are guidelines, yes.

clear, 2 Q. And that includes testifying in a manner which is
3 straightforward, and objective in answers to all
questions on 4 direct and cross-examination; correct?

5 A. Yes.

about 6 Q. Now, sir, we were talking at the time we broke
7 ammonium nitrate; correct?

8 A. Yes.

residues 9 Q. And we were also talking about some of these other
10 that you either did or did not look for. Do you recall
that?

11 A. Yes.

the 12 Q. And specifically at the break we were talking about
13 items that you would find inside the Murrah Building;
correct?

14 A. That was part of the testimony, yes.

of 15 Q. Now, you found inside the Murrah Building a number
16 pieces of shattered and broken plastic; correct?

17 A. I personally didn't find those.

plastic 18 Q. Were a number of pieces of shattered and broken
19 from inside the Murrah Building presented to you for
20 examination?

or from 21 A. I'm not sure whether those items came from within,

22 the exterior of the building.

23 Q. How about -- about how many pieces of plastic were
24 presented to you for examination?

25 A. I really can't give you a number.

11533

Steven Burmeister - Cross

table 1 Q. Would it be enough to cover the top of the counsel
2 here that I'm pointing to?

3 A. Oh, I don't think so.

4 Q. Well, were there more than 100?

can't put 5 A. Again, you're asking me to put a number on it. I
6 a number on it.

7 Q. More than you can remember; is that correct?

that 8 A. Again, I can't put a number to the actual specimens
9 were submitted.

residue? 10 Q. And did you test each of these for explosive

explosive 11 A. Each one that came to me, I would have tested for
12 residues.

13 Q. With what result?

that I 14 A. My recollection right now is the pieces of plastic

15 tested were negative for explosive residues.

16 Q. Now, did you test them all for hydrocarbons?

17 A. No.

18 Q. Now, you had a reason for not testing for
hydrocarbons;

19 correct?

20 A. Yes.

21 Q. And that was because of the background levels?

22 A. Yes.

23 Q. That is, when you are testing for something, you
want to

24 make sure that your findings will be significant --
correct --

25 if you can?

11534

Steven Burmeister - Cross

1 A. I'm not sure what you mean by "significant."

2 Q. Well, if there is a high background level -- for
instance,

3 if you walk into a place that repairs cars and you pick
up a

4 piece of evidence and take it back to your laboratory
and find

5 that you've got something consistent with a medium-
grade fuel

6 oil on it, that doesn't tell you very much except that
it's got

7 fuel oil on it; correct?

8 A. That's right.

9 Q. Because the background of the fuels that are in and
10 hydrocarbons that are present in an auto repair shop is
going
11 to be pretty high. Correct?

12 A. It depends on the particular auto shop, of course;
but I
13 would expect them to be present -- hydrocarbons being
present.

14 Q. Now, is it a part of your job when you look for
something
15 to make -- that might be deposited on an object to make
sure
16 that it didn't come from the surrounding environment,
as
17 distinct from having been placed on the object by some
external
18 force?

19 A. It's always information which is helpful in
assessing the
20 particular finding.

21 Q. And you knew, did you not, that the parking lot
across from
22 the Murrah Building was covered with debris of various
kinds;
23 right?

24 A. I saw that, yes.

25 Q. And you saw that there were cars that had burned;
correct?

11535

Steven Burmeister - Cross

1 A. Yes.

2 Q. You saw that there were firemen. They put out the
fires;

3 correct?

4 A. I didn't see the firemen putting out fires.

5 Q. But you knew that had happened; correct?

6 A. Yes.

7 Q. Now, you testified on direct that ammonium nitrate
is not

8 used as a fire suppressant. That's right, isn't it?

9 A. Yes.

10 Q. Now, did you find background levels of nitrates,
evidence

11 of background levels of nitrates in debris that was

gathered

12 from the parking lot?

13 A. There were samples that were taken from the parking
lot

14 that had nitrate ions on them.

15 Q. And did you find -- now, how is ammonium nitrate
made? If

16 I wanted to make some, what would I do?

17 A. You would react ammonia with a nitric acid solution
and

18 allow the precipitate to form.

19 Q. Okay. So that -- nitric acid: What's that in?
Well, I

20 pharmaceutical

guess from the nitric acid store -- I mean the

21 company. But what's it in, in other stuff?

22 commercial

A. I'm not aware of -- offhand, I'm not aware of

23 products right now that actually contain nitric acid.

24 you found

Q. Then, where do those nitrate ions come from that

25 in the parking lot?

11536

Steven Burmeister - Cross

exactly.

1 A. The source of those nitrate ions, I'm not sure

2 Q. Now, nitrate ions are charged particles; correct?

3 A. Yes.

4 Q. And you use the term "cations" and "anions"; right?

5 A. Yes.

"polarity";

6 Q. Right? And that refers to something called

7 correct?

8 A. Yes.

magnets,

9 Q. Now, we could illustrate that with a pair of bar

10 couldn't we?

11 A. Yes.

12 Q. That idea of polarity?

13 A. Yes.

14 Q. That is, if I had two bar magnets and I tried to
bring them
15 together, if I found that they were resisting coming
together,
16 I'd know that I had -- the two poles were the same;
correct?

17 A. Yes.

18 Q. That I was bringing together?

19 A. Yes.

20 Q. And if they stuck, like two magnets sticking
together, we'd
21 know that I had the opposite poles; right?

22 A. Yes.

23 Q. That I'd have a plus on one side and a minus on the
other
24 side; right?

25 A. Yes.

11537

Steven Burmeister - Cross

1 Q. And the ion process is nothing more than -- that's
a
2 chemical version of what I'm seeing when I use the bar
magnets
3 in that way; correct?

4 A. Your reference is an -- oversimplified, but yes.

5 Q. I understand. Well, correct me if I get
oversimplified,

6 please. Thank you. But it's kind of like that; right?

7 A. Yes.

8 Q. Okay. Now, nitrate ions that are present in nitric
acid

9 then join up with something that's present in ammonia
-- is

10 that right -- to precipitate out ammonium nitrate?

11 A. The entity of ammonia takes on a charge of its own.

12 Q. Yes.

13 A. And the nitrate has a charge of its own as well.
And

14 again, those two would come together and have the
magnetism

15 that you're talking about.

16 Q. So if I pour household ammonia -- That is what I
could use,

17 household ammonia that I could just buy at the store?

18 A. You could, yes.

19 Q. -- and nitric acid together -- I forget from
chemistry

20 class. What am I not supposed to add to what so it
doesn't

21 splash?

22 A. You don't want to add water to the acid.

23 Q. Okay. So I start with the ammonia, then I add the
nitric

24 acid to it; correct? Is that what -- I could do that?

25 A. You could do that, yes.

11538

Steven Burmeister – Cross

1 Q. And then I would begin seeing things precipitating
out;

2 that is, some white stuff coming down to the bottom;
correct?

3 A. You'll have a precipitate, yes.

4 Q. And that precipitate will be ammonium nitrate;
correct?

5 A. Yes.

6 Q. Now, is there any way for ammonium nitrate crystals
to form

7 by the existence of nitrate ions and ammonium ions that
may be

8 present in nature without going through this mixing
process?

9 A. You need to have the forms present; and again when
we start

10 talking about ammonia ions and nitrate ions being in
the nitric

11 acid and the ammonia solution, you have to have those

12 conditions present in order for it to precipitate out.

13 Q. And if I took ammonium nitrate and dropped it into
a beaker

14 of water and mixed it up, it would dissolve; correct?

15 A. Yes.

16 Q. And there is a certain maximum amount that's going
to

17 dissolve based on the chemical properties of ammonium
nitrate;

18 correct?
19 A. Yes.
20 Q. And based on the temperature and pressure and those
things;
21 right?
22 A. Right.
23 Q. Now, if I dehydrate that sample that I've mixed it
in, I'll
24 get back some ammonium nitrate crystals; correct?
25 A. Yes.

11539

Steven Burmeister - Cross

1 Q. Now, a characteristic of ammonium nitrate is that
it is
2 very sensitive to water; is that right?
3 A. It's water soluble.
4 Q. And is that called hygroscopic, or hydroscopic, or
neither?
5 A. I've also referred to it as hygroscopic.
6 Q. H-Y-G-R-O?
7 A. Yes.
8 Q. Hygroscopic. Now, what is that? H-Y-G-R-O-S-C-O-
P-I-C;
9 right?
10 A. Yes.
11 Q. What does that mean?

12 A. Will take on water and absorb it over time.

13 Q. And do you have an opinion if I took some crushed
ammonium

14 nitrate and placed it in a 100-percent-humidity
condition in a

15 watch glass, a small vessel, what would happen to the
ammonium

16 nitrate?

17 A. Based on your particular scenario with 100 percent

18 humidity, I would expect over a certain time frame,
which I'm

19 not sure of, that it would break down.

20 Q. And now what do you mean "break down"?

21 A. It would dissolve into the air and evaporate off.

22 Q. Disappear; right?

23 A. Yes.

24 Q. That is, after a certain amount of time -- and a
time

25 you're not aware of -- you'd come back and look at it
and

11540

Steven Burmeister - Cross

1 wouldn't see any more little white powder there;
correct?

2 A. Yes.

3 Q. Where would it be?

4 A. It would be floating around in the jar that you've

got the

5 container in as a gaseous-type flotation.

under

6 Q. And if I then gradually then reduced the humidity

ammonium

7 controlled circumstances, what would happen to this

8 nitrate that's running around in the air?

basis for

9 A. I -- I could only guess. I don't know a factual

10 it.

11 Q. Have you ever done such an experiment?

12 A. No.

nitric

13 Q. Now, when ammonium nitrate precipitates out in a

certain form;

14 acid or an ammonia solution, the crystals have a

15 correct?

16 A. Yes.

17 Q. Can you predict the form?

18 A. Under certain conditions, you can predict the form.

crystals are

19 Q. All right. And what form do you predict those

20 in?

21 A. I'm sorry. Could you repeat the question?

the form.

22 Q. You say under certain conditions you can predict

crystals.

23 How would we know? That is, now we've got some

say we

24 We're going to look at them under our microscopic. You

those 25 can predict the form; that is, we can predict the shape

11541

Steven Burmeister - Cross

what 1 crystals are going to be. Under what circumstances and

under our 2 form would we expect to see when we started looking

3 microscope?

a 4 A. The form on a solution that is being evaporated in

different than 5 dish -- for example, a petri dish -- the form is

crystals. And 6 those that you actually start to attempt to grow

7 growing the crystals is completely different.

dish: 8 Q. Now, you say the form if you evaporate. A petri

on it; 9 That's just a small, flat dish with not high very sides

10 correct?

11 A. Yes.

going to 12 Q. So if we evaporated out in the petri dish, we're

13 get crystals of one form; correct?

14 A. Yes.

the 15 Q. Then you said there is another way. We can grow

16 crystals?

17 A. Yes. You can start to promote the formation of
specific

18 types of crystals either by seeding it or providing an
avenue

19 for crystals to develop.

20 Q. Now, this is a study you made because you
specialized in

21 microcrystals; correct?

22 A. Yes.

23 Q. Now, you told us on direct examination that there
was

24 something about the shape of the crystals that you saw
on

25 Government's Exhibit 664 that interested you. Correct?

11542

Steven Burmeister - Cross

1 A. Yes.

2 Q. And how did -- tell us about that. First of all,
did

3 you -- did you take any pictures of the crystals in
which you

4 could measure their size?

5 A. No pictures were taken other than the photos that
you have

6 seen.

7 Q. I've seen those photos. Based on those pictures,
is there

8 a record of the size of the crystals in microns?

9 A. No.

10 Q. What's a micron?

11 A. A micron is a form of measurement, a very small
form of

12 measurement that's classically used with scanning
electron

13 microscopy because it's looking at very small levels of
14 particular materials.

15 Q. But I don't know how big it is. How big is it?
How big is

16 a micron?

17 A. Let's see. I'll have to be -- on how many --
offhand, I'm

18 not sure as far as meters and centimeters the size is,
but

19 it's --

20 Q. Is it a metric-type measurement?

21 A. Yes.

22 Q. So it's some fraction of a centimeter; correct?

23 A. Yes.

24 Q. And you're just not sure what fraction it is;
right?

25 A. Yes. The decimal place, I'm not sure of right now.

11543

Steven Burmeister - Cross

1 Q. Okay. But teeny-weeny; right? Small?

2 A. Yes.

3 Q. Okay. Real small. Now, did you -- do you have the
4 capability to measure the individual crystals to get
their
5 dimension?

6 A. That is possible, yes.

7 Q. Did you do it?

8 A. No.

9 Q. Now -- well, were the crystals that you found on
10 Government's Exhibit 664 unusual in your view in terms
of their
11 size?

12 A. Not in their size. It's in the overall shape.

13 Q. Okay. I asked you first size. The answer is no.
Correct?

14 A. Yes.

15 Q. What shape were the crystals that you saw?

16 A. They were in irregular crystalline forms.

17 Q. They were in what kind?

18 A. Irregular.

19 Q. Irregular or regular?

20 A. Irregular.

21 Q. Irregular crystalline forms. Yes.

22 A. In a clear pattern.

23 Q. In a clear pattern. Now, in your lab notes, you
said the
24 pattern was a glaze. Correct?

The 25 A. When you go to a distance, it's in a glazed form.

11544

Steven Burmeister - Cross

itself is 1 clear -- when I refer to "clear," that the crystal

2 opaque, it's not colored or anything like that.

bodies 3 Q. So the crystal does not appear to have any foreign

4 in it; correct?

5 A. Yes.

6 Q. It's pure. Is that what you'd say?

bodies 7 A. Well, "clear" being that there is no other foreign

8 inside the crystal.

nitrate 9 Q. Right. Now, what would make -- is an ammonium

nitric acid 10 crystal that precipitates out by mixing ammonia and

11 clear, or opaque?

something 12 A. It's a -- hugely foggy in its nature. It's not

13 that you could pick up and see opaqueness through it.

transparent 14 Q. All right. Were these crystals more, or less,

nitrate 15 to light than ones you would make by adding ammonium

16 and -- or ammonia and nitric acid together?

17 A. I'm not sure.
18 Q. So you don't know.
19 A. Right.
20 Q. So in terms of their color, you don't know whether
they're
21 more, or less, transparent than ones that would be the
result
22 of this chemical process; is that correct?
23 A. They may be foggier than the other crystals; that
is, the
24 clearness is not as much. But that slight
determination I
25 can't make, and I didn't make it.

11545

Steven Burmeister - Cross

1 Q. Okay. So on -- all right. You can't make and you
didn't
2 make; right?
3 A. Yes.
4 Q. So that what you say is different about them is the
shape.
5 Correct?
6 A. Yes.
7 Q. Do you have pictures that show the shape?
8 A. The photos that you have seen demonstrate the
crystals
9 themselves.

10 Q. I understand. We saw the pictures. But we're
talking
11 about crystals that are a little -- that are 5 or 6
microns in
12 diameter; correct?
13 A. Without measuring, I'm not sure of the exact size.
14 Estimating, it's possible that they would be several
microns in
15 size.
16 Q. Can we see something that small on those pictures?
17 A. How small?
18 Q. 5 or 6 microns.
19 A. It's possible under the one magnification you could
see a
20 particle there.
21 Q. Particle. Now, is that particle a single crystal,
or is it
22 more than one crystal?
23 A. The particle could be made up of several different
24 crystals. It's entirely possible.
25 Q. So you don't know. Is that correct?

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Steven Burmeister - Cross

1 A. Yes.
2 Q. So the answer is you don't know whether you can see
3 individual crystal shapes on the pictures that you

have; isn't

4 that right?

5 A. I can see individual crystals and their irregular
shapes on

6 those photos that we see here.

7 Q. All right. And on those photos, then, what is the
shape of

8 those crystals?

9 A. Again, they're irregular crystalline forms.

10 Q. Are they different from crystals that would occur
or could

11 occur as a result of combining ammonia and nitric acid?

12 A. It depends on your preparation procedure that
you're

13 referring to.

14 Q. So they could be different. Correct?

15 A. It's possible.

16 Q. You don't know?

17 A. Yes.

18 Q. Well, then tell us, please, what it is that's
different

19 about these crystals from what could occur from the
normal

20 fabrication of ammonium nitrate by adding ammonia and
nitric

21 acid together?

22 A. The normal manufacturing process could, in fact,
produce

23 crystals that look this way. There is a possibility
that under

24 the manufacturing process, they could look different.

25 Q. Okay. So -- all right. And is it then the case
that if I

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Steven Burmeister - Cross

1 had my bell jar with 100 percent humidity and I -- and
then

2 caused crystals to reform there -- that is, to
precipitate out

3 of the atmosphere -- do you know what such crystals
would look

4 like?

5 A. In recrystallizing material that would have been
residue

6 that falls within a petri dish like that, I would
expect to

7 find them in a different shape.

8 Q. All right. You would expect to find them in a --
have you

9 ever done that experiment?

10 A. I've taken liquids of ammonium nitrate solutions of
11 ammonium nitrate and allowed them to dry and observed
their

12 crystalline formation.

13 Q. Now -- and did you -- when you did that, did you
find a

14 single type of crystal, or shape of crystal, or there
were

15 different shapes of crystals?
16 A. The studies that I did, the crystalline formation
was more
17 in a sheet-like formation of crystals, not individual
crystals
18 as we see on this specimen.
19 Q. Like a glaze?
20 A. No.
21 Q. What's the difference between a glaze and a sheet-
like one?
22 A. A glaze is what we see here. A sheet is a
continuous sheet
23 or very much like this piece of glass on the table top.
24 Q. That's -- a piece of glass on a table top: That's
a sheet;
25 right?

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Steven Burmeister - Cross

1 A. Yes.
2 Q. And you say a glaze is what we see here. I'm not
--
3 without regard to what we see here, in your vocabulary,
what's
4 the difference between a glaze and a sheet?
5 A. Well, a glaze is the particles that we see on this
6 particular specimen. A sheet is a continuous sheet of
7 crystalline formation.

8 Q. Uh-huh. Now, are you saying that a sheet is a
glaze that
9 goes over a larger area and is more consistent than a
glaze?

10 A. I don't understand what you mean.

11 Q. Well, a sheet, you say, is something that has
12 characteristics. It is flat, it is shiny, and it is
uniform.

13 Correct? Is that your definition of a sheet?

14 A. No.

15 Q. What is your definition of a sheet?

16 A. A sheet would be a formation of a solid formation.
If you

17 want, a piece of ice, for example, forming on a
surface: That

18 is what I would consider a sheet. If you see
individual

19 particles like salt or sugar, that's a glaze.

20 Q. Are you telling us that when you use the word
"glaze" in

21 your laboratory notes -- and you did use that word;
correct?

22 A. Yes.

23 Q. And you didn't ever use the word "embedded" in your
24 laboratory notes describing this phenomenon, did you?

25 A. No.

1 Q. You're telling this jury when you use the word
"glaze," you
2 meant individual particles. Is that your testimony?
3 A. Yes.
4 Q. Now, in addition to examining plastic and these
items --
5 oh, I forgot to ask: Did you ask anyone to take soil
samples
6 or dirt samples from the parking lot to determine what
chemical
7 substances were present there -- were present there?
8 A. No.
9 Q. Did you attempt to determine what background levels
of
10 nitrates existed in the environment in the parking lot?
11 A. No.
12 Q. You found a number of nitrate ions -- you found a
number of
13 evidences of nitrate ions on items submitted from the
parking
14 lot; correct?
15 A. I don't know the exact number. I know some items
that were
16 submitted from that parking lot area did contain
nitrate ions
17 on them.
18 Q. And you're unable to say whether those were the
result of
19 background levels of nitrate ions or whether they were
part of

20 some ammonium nitrate; is that correct?

21 A. Yes.

22 Q. Now, you also conducted a test on a dynamite
wrapper;

23 correct?

24 A. It was reported to be consistent with a dynamite
wrapper.

25 Q. Uh-huh. And that was recovered inside the Murrah
Building;

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Steven Burmeister - Cross

1 correct?

2 A. I'm not sure where the actual item was recovered
from.

3 Q. Would it refresh your recollection if I suggested
it had

4 been recovered from a body bag?

5 A. A body sounds familiar. A bag, I don't remember
that

6 aspect.

7 Q. Now, you were -- we were talking earlier about the
ammonium

8 nitrate vs. urea nitrate. Now, ammonium nitrate, if
you find

9 that at a blast scene, what have you learned? What
does it

10 tell you? What is -- suppose the ammonium nitrate on
this --

11 suppose -- let's assume this came from -- whatever was

on here

12 came from the blast. All right? What does that tell
us?

13 A. Well, if you're determining that it came from the
blast,

14 that that particular blast could have contained
ammonium

15 nitrate.

16 Q. So now we know it could have contained ammonium
nitrate.

17 Correct? So it could be ammonium nitrate and fuel oil;

18 correct?

19 A. It's possible.

20 Q. It could be ammonium nitrate and nitromethane;
correct?

21 A. Yes.

22 Q. Could be dynamite; correct?

23 A. Yes.

24 Q. Could be slurry; correct?

25 A. Yes.

11551

Steven Burmeister - Cross

1 Q. Could be a water gel emulsion; correct?

2 A. Yes.

3 Q. What else could it be?

4 A. Could be an emulsion.

5 Q. What's an emulsion?

6 A. It's another one of the ammonium-nitrate-containing
7 explosives very similar in the category of the slurries
and
8 water gels.

9 Q. So do you know how many million pounds of ANFO are
used
10 every year in the United States?

11 A. No.

12 Q. Okay. And -- but all of these -- well, have I gone
through
13 all the different kinds of explosives that contain
ammonium
14 nitrate?

15 A. No.

16 Q. How many more are there?

17 A. There could be others. I'd have to pull out the
reference
18 texts to find all of the other combinations of
explosives that
19 contain it.

20 Q. Okay. So there are many; correct?

21 A. There are --

22 Q. Dozens?

23 A. Yes, I would say, more than.

24 Q. Dozens. And each of the dozens may be sold under
more than
25 one brand name; correct?

11552

Steven Burmeister - Cross

1 A. Yes.

2 Q. Now, ammonium nitrate explosives -- an ammonium
nitrate and

3 fuel oil combination can have a very broad range of
velocity of

4 detonation; correct?

5 A. Yes.

6 Q. And that's going to be based on a number of
variables.

7 Correct?

8 A. Yes.

9 Q. Now, it would be important, would it not, if we
found

10 ammonium nitrate on here -- be important not to leap to
a

11 conclusion as to exactly what the explosive charge was.
Right?

12 A. You don't want to leap to any conclusion; yes.

13 Q. Right. And so it would be improper just because
you find

14 ammonium nitrate on here to hypothesize that any
particular

15 thing caused the blast. Correct?

16 A. You would need more information at that point.

17 Q. Right. Now, if I took this piece to the laboratory
-- of

18 course, I've been handling it. This is Government's

Exhibit

19 664 -- would I find any ammonium nitrate on it?

20 A. Are you referring to now?

21 Q. Yes. Now.

22 A. It's possible.

23 Q. Well, let's look. You first got it in your
laboratory on

24 the 20th of April; correct?

25 A. I received it on the 28th, yes.

11553

Steven Burmeister - Cross

Correct? 1 Q. And you caused a number of tests to be performed.

2 A. Yes.

for 3 Q. Showing you now what's in Government's Exhibit 1744

these when 4 demonstrative purposes. And we'll look at some of

5 we get the focus here.

6 Now, you told us about the chemical spot test.

7 Correct?

8 A. Yes.

9 Q. And that, you did yourself. Right?

10 A. Yes.

strong 11 Q. And you said that it showed the presence of a

12 oxidizer; right?

13 A. Yes.

14 Q. You said ammonium nitrate; that is, consistent with
oxidizer?
15 ammonium nitrate. You just know it's a strong

16 A. Yes.

17 Q. Do you have any idea what proportion of the
ammonium
18 nitrate that's made is used for explosive applications
and what
19 proportion is used for fertilizer applications?

20 A. No.

21 Q. So when you in your direct examination kept calling
22 ammonium nitrate an explosive, we could just as well
call it a
23 fertilizer; right?

24 A. You could do that, yes.

25 Q. Right. And as far as proportions are concerned,

11554

Steven Burmeister - Cross

1 fertilizer, explosive, you don't know; right?

2 A. That's correct.

3 Q. Okay. The next thing that happened was that
somebody did
4 polarized light microscopy. Right?

5 A. Yes.

6 Q. Who did that?

7 A. I did.

8 Q. Fourier FTI -- what do we call it Fourier transform
9 infrared -- FTIR?

10 A. Spectroscopy, but yes.

11 Q. Right. And who did that?

12 A. Chemist Mary Tungol.

13 Q. And do you know -- and then you did X-ray
diffraction with

14 the Gandolfi camera, single crystal exam. That was
done at the

15 Smithsonian?

16 A. Yes.

17 Q. Who did that?

18 A. I forget the actual individual, but it was Special
Agent

19 Bruce Hall who witnessed the examination.

20 Q. Now, with the Gandolfi camera, could you take a
picture of

21 the crystal?

22 A. No.

23 Q. You just analyze it. Correct?

24 A. It's kind of -- by saying "camera," it's an
apparatus that

25 records a spectrum of diffracted X-ray beams, and
that's all

Steven Burmeister - Cross

1 it's recording and photographing.

look at

2 Q. Did you have in the lab a device by which you could

crystal

3 these individuals crystals to see their structure one

4 at a time?

that, yes.

5 A. The scanning electron microscope could have done

6 Q. But you didn't do it?

7 A. No.

you're

8 Q. Then you had ion chromatography anions; and now

9 finding nitrate ions. Correct?

10 A. Yes.

the

11 Q. Now, you found nitrate ions in a large number of

12 samples submitted; correct?

13 A. Many of the items had nitrate ions in them.

correct?

14 Q. And you did not test the area from which they were

15 collected to see the background level of nitrate ions;

16 A. Yes. That's correct.

correct?

17 Q. Nitrate ions do occur in nature; that is to say, as

18 background matter in a large number of applications;

19 A. I'm not sure what you mean by "applications."

acid rain;

20 Q. Well, in -- nitrate ions are going to show up in

21 correct?

22 A. It could.

23 Q. Nitrate ions are going to show up if people have
been

24 fertilizing their lawns; correct?

25 A. It could.

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Steven Burmeister – Cross

1 Q. What other ways do nitrate ions occur naturally in
our

2 environment around us?

3 A. They could be found in various food articles or
certain

4 manufactured products.

5 Q. Food articles. You mean, what, bacon?

6 A. Yes.

7 Q. So that nitrate -- nitrate -- one test -- if you
take some

8 bacon and test it for nitrate ions, you'll find them in
there

9 usually?

10 A. I don't know usually. I thought that they were
trying to

11 phase out nitrates, but you could find some food
products that

12 have it.

13 Q. In other words, you could go to the store and look

and it

14 says canned ham -- for instance, would have nitrates in
it --

15 correct -- often listed on the label? I don't know,
but does

16 it?

17 A. Like I said, I thought they were trying to phase
out

18 nitrates in food products, but it could.

19 Q. All right. But in some food products. Right?

20 A. Possible, yes.

21 Q. Okay. And anything else?

22 A. Not that I recall right at the moment.

23 Q. Okay. Then you did capillary zone electrophoresis.
You

24 found some more nitrate ions; correct?

25 A. Yes.

11557

Steven Burmeister - Cross

1 Q. Then you did ion chromatography cations, and the
cations

2 are just ions that have that different polarity that we
were

3 talking about before. Who did the ion chromatography?

4 A. That was a chemist, Tim McLaughlin, who was working
with

5 me.

6 Q. How about the capillary zone thing --
electrophoresis?

7 A. It was either the chemist or myself who would have
run that

8 particular --

9 Q. Which chemist?

10 A. Tim McLaughlin.

11 Q. McLaughlin. And how about the ion chromatography
cation?

12 A. That would have been again the chemist Tim
McLaughlin.

13 Q. Now, there you're looking for ammonium ions. In
what way

14 do -- do they occur in nature? I mean in our
environment? I

15 don't mean in nature. But as we walk around, are we
going to

16 see things that have ammonium ions on them?

17 A. You could find some things, yes.

18 Q. And what kind of things will we find these ammonium
ions

19 on?

20 A. Things that are close by: a fertilizer that
contains

21 ammonium ions in it. It's very possible.

22 Q. And how about household ammonia?

23 A. Household ammonia, yes.

24 Q. Things we use to clean ourselves up. What other
things?

25 The fertilizer, household ammonia. What else?

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Steven Burmeister - Cross

1 A. That's all that's coming to mind right at the
moment.

2 Q. Okay. Then we did the UV detection, the ion
chromatography

3 cations. Who did that?

4 A. Again, that could have either been myself or
chemist Tim

5 McLaughlin.

6 Q. How about the scanning electron microscope?

7 A. That would have been done by our scanning electron
8 microscopist, Dennis Ward.

9 Q. And then you did gas chromatography and ion
mobility, and

10 you didn't detect any high explosives. Correct?

11 A. Yes.

12 Q. Now, what role, if any, did Mr. Martz play in this?

13 A. None.

14 Q. He didn't do any of these tests. Is that right?

15 A. That's right.

16 Q. Now, we were talking about this -- you examined
this --

17 started your examinations on the 28th of April;
correct? By

18 when was all of this testing that you've described here

19 completed?

20 A. The item went back May of -- May 22, 1995.

21 Q. Okay. So from April 28 to May 22; correct?

22 A. Yes.

23 Q. And when did -- did you then come to look at it
later and

24 find that there were no crystals on it?

25 A. Sometime later, there was a very cursory
examination

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Steven Burmeister - Cross

1 performed by myself, and I did not find any crystals on
it.

2 Q. Okay. When was that that you looked at it and
didn't find

3 any crystals on it?

4 A. I'm -- my recollection, I think November of '96, I
believe,

5 was the date that an examination was done by myself.

6 Q. Now, you testified on direct examination that in
the

7 meantime it had gone out to Mr. Buechele; correct?

8 A. Well, after I received it, I know that it had gone
to other

9 examiners. The exact sequence and who exactly it went
to, I'm

10 not familiar.

11 Q. Okay. And therefore, you -- do you have any
explanation

12 that's scientifically valid or scientific-based
explanation for

13 the disappearance of the crystals?

14 A. I could provide an explanation as possible sources
for the

15 crystals to have disappeared.

16 Q. My question is do you have any possible sources?

17 Okay. I objected before. I'll take it now.
If we

18 were going to look for a reason why, what would we look
for?

19 A. Well, handling of that particular item could cause
those

20 crystals to be scraped or removed off of the surface.

21 Q. All right. Are you aware that anyone scraped this
surface?

22 A. When I say scraped, if someone applies it to the
table and

23 it's moved slightly, that's a scraping of the surface.

24 Q. All right. So you say that could remove it;
correct?

25 Scraping.

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Steven Burmeister - Cross

1 A. Yes. Scraping, brushing --

2 Q. Okay.

3 A. -- touching.

just 4 Q. Moving. Moving just across a surface of a table,
5 like -- without any pressure on it. That could do it?
6 A. It's possible.

No. 2? 7 Q. Okay. So that could cause it to disappear. What's
8 A. Just the course of time exposed to high-humidity
9 environments could cause it to disappear.

the 10 Q. Okay. Do you have places in the FBI Laboratory for
cases that 11 storage and retaining of crucial evidence in bombing
disappears? 12 are of such high humidity that trace evidence
13 A. I'm not aware of any.

Is 14 Q. But you believe that that's possible based on your
15 experience that these things disappear because of that.
16 that correct?

entirely 17 A. Sometime if the item is exposed to a high-humidity
18 environment over the course of a long term, it's
particular 19 possible that could contribute to the loss of those
20 crystals.

possible we 21 Q. All right. Do you have a third explanation
22 should think about?
23 A. Not that I can recall right at the moment.
24 Q. Were you concerned when you looked in whenever it

was,

25 1996, and found that your crystals weren't there?

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Steven Burmeister - Cross

1 A. I don't know what you mean by "concerned." They
were gone.

2 Q. Did that concern you at all?

3 A. I would say that I was -- I don't know if I can say
I was

4 concerned about it. There was an explanation from all
the

5 traffic that the particular item had that it doesn't
surprise

6 me that they were no longer there. I was, if you will,

7 disappointed that they weren't there.

8 Q. You were disappointed. And when you said you were
-- it

9 didn't surprise you, did you then conduct an
investigation to

10 verify which ones of these hypotheses might be true?

11 A. No.

12 Q. If environmental conditions inside the FBI
Laboratory could

13 cause these crystals to disappear, did you consider
what the

14 effect on the crystals might have been of having been
through

15 an Oklahoma-style gully-washer rainstorm, the trample
of feet

objects 16 of officers across a parking lot, the resting on metal
17 that were being retrieved and handling in the course of
18 evidence collection? Did you think back to that time
and
19 wonder whether your initial conclusions might have to
be
20 revisited?
21 A. No.
22 Q. Did you conduct any tests in the FBI Laboratory to
23 determine what it was that among your various
hypotheses, your
24 various theses, that caused the crystals to disappear?
25 A. Would you ask that one more time.

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Steven Burmeister - Cross

crystals 1 Q. Did you do anything to try to figure out why the
2 disappeared?
3 A. No.
4 Q. We've established that before the crystals
disappeared, you
5 hadn't -- you hadn't done any photographs that would
show the
6 shape or size of the crystals -- individual crystals;
correct?
7 A. At the time of the examination, yes.

8 Q. Now, earlier, before the break, we were talking
about a
9 test. And I will ask you, sir, isn't it a fact that
you
10 questioned one agent's finding on a prior occasion,
prepared a
11 blind test, and asked the agent to test a mixture of
urine,
12 ammonium nitrate, and urea? Did that happen?

13 A. Yes.

14 Q. And this blind test: The agent concluded that the
mixture
15 was urea nitrate; correct?

16 A. Well, I'm not sure if it was a conclusion. It was
17 consistent with the presence of urea nitrate.

18 Q. And in that case, where did the ammonium nitrate
come from?

19 Is that from the FBI purchases?

20 A. That's correct.

21 Q. And where did the urea come from?

22 A. The urea that was used was urea that had been
seized as a

23 result of a search during that particular case.

24 Q. And where did the urine come from?

25 MS. WILKINSON: Objection, your Honor.

1 THE COURT: Sustained.

2 BY MR. TIGAR:

3 Q. But it was human. A human product; correct?

4 A. Yes.

5 Q. All right. Now, you are familiar, are you not,
sir, with

6 how to build an ammonium nitrate/fuel oil bomb?

7 A. I'm aware of the components that would -- could go
into it.

8 Q. And you've read the Anarchist's Cookbook, have you
not?

9 A. Parts of it. Most of it, yes.

10 Q. Now, where can you buy the Anarchist's Cookbook to
show you

11 how to build one of these things?

12 A. You could get information off of the Internet for
where to

13 purchase texts on this. You can go to particular
companies

14 that will sell various anarchist literature.

15 Q. Can you get these books at gun shows?

16 A. I don't know. I've never been to a gun show.

17 Q. Do you know of a particular publisher where you can
buy

18 books on how to make these devices?

19 A. Yes.

20 Q. Which one is that, or which ones are those?

21 A. You could go to a company called Paladin Press.

22 Q. And if we wanted to go to Paladin Press and find

and buy

23 these books -- How many books on how to build these do
they

24 sell at -- do they make at Paladin Press?

25 A. I don't know the exact number.

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Steven Burmeister - Cross

1 Q. More than a dozen?

2 A. Again, I don't know a number that they sell.

3 Q. But you've read some of theirs; correct? And if we
wanted

4 to go buy one right from where they're made, where
would we go?

5 A. Buy the what?

6 Q. Paladin Press. Where is Paladin Press?

7 MS. WILKINSON: Objection. Relevance, your
Honor.

8 THE COURT: Overruled.

9 BY MR. TIGAR:

10 Q. Where is Paladin Press?

11 A. I believe it's in Colorado.

12 Q. It's in Boulder, isn't it?

13 A. Again, I believe. I don't know for a fact.

14 Q. Now, would you agree with me that in view of
ammonium

15 nitrate -- well, do you know the book Scientific
Evidence in

16 Criminal Cases by Moenssens?

17 A. I don't think I've seen that.

18 Q. Well, would you agree with me, sir, that in view of
19 ammonium nitrate's widespread use in farming as a
fertilizer as

20 well as in blasting agents, an analytical procedure
which

21 reveals ammonium nitrate traces has not necessarily
proved its

22 use as a blasting agent?

23 A. Could you read that one more time.

24 Q. Sure. In view of ammonium nitrate's widespread use
in

25 farming as a fertilizer as well as in blasting agents,
an

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Steven Burmeister - Cross

1 analytical procedure which reveals ammonium nitrate
traces has

2 not necessarily proved its use as a blasting agent. Do
you

3 agree with that?

4 A. Yes, I would agree with that.

5 Q. Now, would you agree that the constituents of
blasting

6 agents are generally inorganic nitrates -- that is,
ammonium

7 nitrate -- and carbonaceous fuels and may also contain

powdered

8 aluminum or ferrosilicon?

9 A. I would go very heavily on the "may."

10 Q. All right. Now, you tested and found aluminum,
silicon,

11 and sulfur; correct?

12 A. Yes.

13 Q. Now, aluminum is a constituent of commercially
produced

14 blasting agents, isn't it?

15 A. It's not found in the pure powdered aluminum. It's
in a --

16 it's a part of a molecule. There is more to it.

17 Q. Yes.

18 A. But it's not in the original pure-metal form of
aluminum.

19 Q. Of course. That is, the -- so you're saying that
there is

20 an aluminum compound present in blasting agents;
correct?

21 A. Yes.

22 Q. And at what temperature would we expect that
compound to

23 come apart and to get a deposition of aluminum?

24 A. I don't know.

25 Q. But it is your testimony that aluminum is a
constituent of

Steven Burmeister – Cross

1 commercial blasting agents; correct?

2 A. It's in very trace amounts, but it is a
constituent.

3 Q. Now, at the crime scene, you instructed agents to
wear

4 gloves; correct?

5 A. I'm not sure if I actually made an outward
endorsement of

6 wearing gloves. It was my understanding that
individuals would

7 wear gloves at the crime scene.

8 Q. And you wear gloves in the laboratory; correct?

9 A. Yes, I do.

10 Q. And you use two pairs. Is that right?

11 A. Yes, I do.

12 Q. And are they lined, or unlined? I mean are they
powdered,

13 or unpowdered?

14 A. Actually, I used both in certain situations. The
ones that

15 I usually use that I have right now are unlined -- they
do not

16 have material inside to take up moisture.

17 Q. The ones you use now do not?

18 A. Right.

19 Q. Now, do you know what kind of glove Mr. Kelly was
using on

20 the day in question?

21 A. No.

agents
22 Q. Do you know what kinds of gloves were issued to the
23 at the scene?

24 A. No.

in a
25 Q. Now, sir, you also testified that you participated

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Steven Burmeister - Cross

1 search of Mr. Nichols' home. Do you remember that?

2 A. Yes.

to Kansas
3 Q. Now, what time did you arrive in Kansas? You got
4 on the 22d?

5 A. I arrived on the 22d, yes.

6 Q. And that was a Saturday?

7 A. Let's see. Wednesday being the 19th. Yes.

8 Q. Now, did you attend a briefing before the search?

9 A. Yes.

10 Q. Where was the briefing held?

sure if
11 A. It was at the Herington public service -- I'm not
12 it was the police, but it was a fire station, police/
fire

13 station combination.

14 Q. And you -- who conducted the briefing?

15 A. I'm not sure the exact individual at this point.
16 Q. Were a number of other agents present?
17 A. There were a number of people there for the
briefing.
18 Q. Was Ms. Jasnowski, Agent Jasnowski present?
19 A. Yes.
20 Q. And so -- and the other agents that were present:
They
21 were the ones who were going to do the search; correct?
22 A. At that particular point, I didn't know who was
exactly
23 going to be doing what. I just remember there were a
number of
24 people at that particular briefing.
25 Q. You testified on direct examination that you
conducted a

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Steven Burmeister - Cross

1 procedure before other agents entered the house to
check for
2 booby traps; correct?
3 A. Not myself, no.
4 Q. That was done; correct?
5 A. It was done.
6 Q. Now, were you aware that there had been a
conversation
7 between the FBI agents and Mr. Nichols about whether or

not

8 there were booby traps? Were you aware of that; that
is, on

9 the 22d of April?

10 A. I may have been aware that -- I'm not sure. No,
I'm not

11 sure whether I knew at that particular point in time.

12 Q. On direct examination, did you testify that you
were aware?

13 A. I'd have to see the testimony to recall that. It's

14 possible that I knew at that particular point. Right
now

15 today, I'm not sure whether I did or not.

16 Q. Now, did you have a diagram of where weapons might
be

17 located within the house?

18 A. I did not have a diagram.

19 Q. Did anybody have a diagram?

20 A. I don't know if anybody did or not.

21 Q. You didn't see one; is that right?

22 A. That's correct.

23 Q. Did you -- did anybody at the briefing go over the
-- what

24 Mr. Nichols had said to the FBI the night before?

25 A. I don't recall that.

11569

Steven Burmeister - Cross

1 Q. Now, in the house, you said you found nitromethane.

2 Correct?

3 A. There was a container that had a label on it that
suggested
4 nitromethane.

5 Q. "Suggested." Now, tell us about the container.
What did
6 it look like?

7 A. The container stood about this tall. It was a
plastic
8 jug-like container and had a label on the front end of
the
9 label -- on the front end of the container.

10 MR. TIGAR: Is that exhibit in court?

11 MS. WILKINSON: Yes.

12 MR. TIGAR: This has a Government number on
it, your
13 Honor, 2119, but I'd like to offer it.

14 MS. WILKINSON: We have no objection.

15 THE COURT: All right. We'll keep it marked
as a

16 Government's exhibit. Is that all right?

17 MR. TIGAR: Yes, your Honor.

18 BY MR. TIGAR:

19 Q. Is this the container?

20 A. Yes, it looks like it.

21 Q. Do you want to take a look at it so you can tell?

22 A. Yes.

23 Q. Now, this -- where was the container, sir?

24 A. It was in the basement area of the main house.

25 Q. And -- now, this container says -- let's see if we
can make

11570

Steven Burmeister - Cross

1 this machine work for us here. There we go.

2 "15 percent nitro," and it says "model engine
fuel."

3 Correct?

4 A. Yes.

5 Q. Okay. And then it says, "Specially formulated for
today's

6 radio-control model applications, assures top
performance and

7 peak rpm," etc. Correct?

8 A. I agree, because it's a little blurry for me --

9 Q. It is? Well, this has auto focus.

10 Does that help? Can you read it now?

11 A. It's getting better.

12 Yes.

13 Q. Okay. Now, this is the sort of thing that you can
buy in a

14 model-airplane store; right?

15 A. I would assume. I've not purchased that kind of
material

16 in a model store.

17 Q. Did you see a cardboard box in the basement that
was near

18 the bottle of model-airplane fuel?

19 A. Yes.

20 Q. And tell the jury what was in the cardboard box.

21 A. My recollection is vague, but I seem to recall some
sort of

22 model-type apparatus in the box.

23 Q. It was a model-airplane engine -- wasn't there?

24 A. Like I said, my recollection is vague, but some
sort of

25 model-type material.

11571

Steven Burmeister - Cross

1 Q. So what you saw was a box full of components for a
model

2 airplane; correct?

3 A. My recollection is extremely vague, but that's --
my

4 recollection is there is some sort of model-type stuff
in the

5 box.

6 Q. Okay. Now, you seized this. Right?

7 A. The container was taken, yes.

8 Q. Yes. And you tested it; correct?

9 A. The contents of that container was tested.

airplane 10 Q. Yes. And you found out that it contained model-

11 fuel; correct?

12 A. It contained nitromethane and methanol.

here; 13 Q. Well, it contained what's labeled on the front

14 correct?

15 A. Yes.

16 Q. The label says methanol 99.9 percent, nitromethane
17 98 percent, and so on. It contained what it said on
there;

18 right?

findings, 19 A. I wasn't comparing the label with the chemical

methanol. 20 but the chemical findings were nitromethane and

21 Q. Now, what's methanol? Alcohol?

22 A. Yes.

23 Q. Okay. Now, do you consider methanol a hydrocarbon?

24 A. Yes.

25 Q. And this says 15 percent nitro. Correct?

11572

Steven Burmeister - Cross

1 A. Yes.

would 2 Q. So this is not the 100 percent nitromethane that I

a fuel 3 get if I went to a racetrack and bought nitromethane as

4 in a barrel; correct? Or do you know?

it's 5 A. I don't know the exact percentages, but I believe

6 higher than that.

7 Q. And did you take the model airplane?

8 A. No.

that you 9 Q. When you reported out your results, did you report

10 had found model-airplane fuel and a model airplane?

11 A. No.

right? 12 Q. You just reported you had found nitromethane;

13 A. The result was nitromethane and methanol.

14 Q. Yes. Okay. You reported that result. Right?

15 A. Yes.

incorporated 16 Q. And were you aware that your result was then

17 in a report concerning the presence of nitromethane in

18 Mr. Nichols' house?

this item. 19 A. I'm not sure the exact report that went out with

were going 20 Q. But did you take steps to make sure that people

21 to understand that this was found right next to some

22 model-airplane parts? Did you do that?

23 A. No.

24 Q. Are you aware of what your principal examiner --

how your

25 principal examiner reported the nitromethane finding?

11573

Steven Burmeister - Cross

1 A. No.

2 Q. You've never -- is your testimony, sir, that you
have never

3 read a report of your principal examiner, Special Agent
4 Williams, containing his discussion of the nitromethane
5 finding? Is that your testimony?

6 A. I do not recall what he put down, or nitromethane.

7 Q. I didn't ask you that, sir. Is it your testimony
that you

8 never read the report of your principal examiner,
Senior

9 Special Agent Williams, about -- that contained a
reference to

10 nitromethane? Do you remember reading his report, or
not?

11 A. I don't recall reading a report where it discusses
12 nitromethane.

13 Q. Now, you mentioned, also, that when you went into
the

14 Nichols house, the Nichols home there, you used an ion
mobility

15 spectrometer; correct?

16 A. Yes.

the 17 Q. And you detected the presence of nitroglycerine in
18 atmosphere; correct?
19 A. Not in the atmosphere. On some items.
business 20 Q. On some items. Now, you know what Mr. Nichols'
21 is; correct?
22 A. No.
weapons; 23 Q. Well, you looked around the house and saw a lot of
24 correct?
25 A. There was a room that had numerous weapons in it.

11574

Steven Burmeister - Cross

1 Q. And you saw some ammunition; correct?
2 A. Yes.
3 Q. Did you see double-base smokeless powder?
4 A. I don't recall seeing any particles of double-base
that. 5 smokeless powder in any container or anything like
smokeless 6 Q. Now, double-base -- do you know if double-base
7 powder was found?
found 8 A. I'm not aware of double-base smokeless powder being
9 in the residence.
10 Q. Okay. Now, what is double-base smokeless powder?

comes -- 11 A. Double-base smokeless powder is a propellant. It
single-, 12 propellants come in basically three different types:
13 double-, and triple-base smokeless powder. Double-base
used in 14 smokeless powder is traditionally the propellant that's
we use in 15 the cartridges that are then attached to bullets that
16 firearms.

17 Q. Okay. So -- now, is nitroglycerin an ingredient of
18 double-base smokeless powder?

19 A. Yes.

20 Q. So that if you walk into somebody's house and
they've got a 21 lot of guns and ammunition, are you surprised to find
traces of 22 nitroglycerin?

23 A. No.

24 Q. Would you be surprised not to?

25 A. I think I would be surprised not to find it.

11575

Steven Burmeister - Cross

1 Q. Okay. Now, you testified on direct examination
that this

2 object, the GX -- Government's Exhibit 664, appears to
have

3 been sheared. Correct?

4 A. Yes.

5 Q. And what do you mean "sheared"?

6 A. That's in comparison to the known exemplar from a
normal

7 truck panel that is much thicker, and obviously layers
have

8 been sheared or removed off of that particular item.

9 Q. Now, did you see when you first examined it any
sign of

10 scorching?

11 A. I don't recall seeing any kinds of scorching on
that item.

12 Q. Now, did you reach any conclusions based on the
absence of

13 scorching?

14 A. No.

15 Q. Now, if we look at it in its present form, sir,
it's clear

16 it's been handled a lot; right?

17 A. Yes.

18 Q. Okay. Now, do you see the light-color part here
that I'm

19 pointing to?

20 A. Yes.

21 Q. Does that appear as though a shard of the material
has been

22 taken off? A piece of the material?

23 A. I don't know.

look? 24 Q. Would you like me to bring it up to you so you can

machine? 25 That's not a very good way to look, is it, on that

11576

Steven Burmeister - Cross

1 A. No.

2 MR. TIGAR: May I approach, your Honor?

3 THE COURT: Yes.

4 BY MR. TIGAR:

Does that 5 Q. If you just -- I'm pointing to this right here.

6 look like a piece got broken off there?

7 A. Yes. It's entirely possible.

this 8 Q. And do you have any view or theory about how -- why

whereas 9 part here -- see, these parts are this brownish color,

more clear, 10 the fresh part underneath the shard is the white --

11 almost white color?

12 A. I don't know.

immersed 13 Q. Did you attempt to see what would happen if you

wood? 14 this thing in water to see if that would discolor the

15 A. No.

16 Q. Now, in addition to conducting your ion mobility

17 spectrometer tests in the Nichols house, did you do
other --
18 you also took some soil samples. Correct? Did you
take
19 samples of dirt scrapings?
20 A. No, I did not take any soil samples that I recall.
21 Q. You took no dirt scrapings or anything like that
that you
22 can remember?
23 A. From the residence?
24 Q. Yes, from the residence.
25 A. Not that I recall.

11577

Steven Burmeister - Cross

1 Q. Okay. And did you participate in any searches out
at Geary
2 Lake?
3 A. No.
4 Q. Now, you told us that among the high explosives you
tested
5 for were PETN and HMX. Correct?
6 A. Not all items were tested for HMX.
7 Q. All right. And what was the purpose of testing for
those
8 items? Because they're high-explosive residues?
9 A. They're high explosives, yes.

10 Q. And if a person handles blasting caps and uses
them, is it
11 your experience that -- that that person would get
those
12 residues on them?
13 A. Handling a blasting cap?
14 Q. Yeah. Handling blasting caps.
15 A. There are some blasting caps that are contained
within
16 themselves, and I wouldn't expect someone to actually
get the
17 residues on their hands.
18 Q. That kind of blasting cap. How about if a person
assembles
19 something with det cord and blasting caps? Would you
expect
20 them to have high-explosive residues on their person
from that?
21 A. It's possible.
22 Q. And in fact, you conduct those kind of tests.
Correct?
23 A. Yes.
24 Q. In fact, you found such residues on Mr. McVeigh's
clothing;
25 correct?

11578

Steven Burmeister - Cross

1 A. Yes.

this 2 Q. Sir, I'm going to ask you -- I'm going to show you

3 log. This is from -- no, I'm not.

4 Almost done, sir.

of your 5 Now, you testified -- Did you, in the course

6 duties, have occasion to brief Ms. Linda Edwina Jones

case? 7 concerning an opinion that she is to render in the

she was 8 A. I didn't brief her on any particular opinion that

9 going to render.

Nothing 10 Q. Have you met with her to discuss these matters?

rely on 11 wrong with it. I mean as an expert, you're entitled to

12 the views of others; correct?

13 A. Yes.

witness 14 Q. And that is, you differ from an ordinary fact

15 because you're permitted to do that; right?

16 A. Yes.

people 17 Q. And you're permitted to rely on things that other

18 told you; correct?

19 A. Yes.

who are 20 Q. And you may share your opinions with other experts

21 also going to come and testify; right?

22 A. Yes.

23 Q. And there is nothing wrong with that, is there,
sir?

24 A. It's my understanding there is no problem with it.

25 Q. That's the way the rules are. That's the way it's
supposed

11579

Steven Burmeister - Cross

1 to be.

2 Okay. Now, did you meet with Ms. Jones?

3 A. I met with her regarding a particular specimen.

4 Q. Okay. What specimen did you meet with her about?

5 A. I relayed the findings on the particular specimen
Q507.

6 Q. Did you share with her your laboratory notes?

7 A. Yes.

8 Q. Did you send those? Did you tell her that the
crystals had

9 been embedded?

10 A. I may have -- may have discussed that with her. I
don't

11 know the exact conversation I had with her.

12 Q. You don't remember whether you told her they were
embedded,

13 or not. Is that right?

14 A. I don't recall the exact conversation that I had
with her

15 regarding that.

16 Q. Okay. How many times did you meet with her?
17 A. I recall one meeting that I had with her regarding
specimen
18 Q507.
19 Q. When was that?
20 A. It would have been earlier this year, prior to a
previous
21 trial.
22 MR. TIGAR: May I have just a moment, your
Honor?
23 THE COURT: Yes.
24 MR. TIGAR: One more area.
25 BY MR. TIGAR:

11580

Steven Burmeister – Cross

1 Q. When you first arrived at the Nichols home, you
said that
2 you found pieces of things you later identified as
ammonium
3 nitrate; correct?
4 A. Yes.
5 Q. Those were in those little vials? Is that right?
6 A. That was on the exterior of the house. There were
7 additional samples on the interior.
8 Q. I understand. In the interior you found some in a
9 little -- in plastic containers; correct?

10 A. That was one location. There was another location.
11 Q. Where was the other location? In the bucket?
12 A. No. There was a -- as you entered into the side of
the
13 house, there was a piece of paper up on a shelf. It
was a
14 rolled-up piece of newspaper, and there were powder
residues on
15 the interior of the newspaper.
16 Q. Consistent with that having been used as a paper
funnel to
17 grind the ammonium nitrate. Correct?
18 A. That's possible.
19 Q. Consistent. I'm not saying "identified as," but
consistent
20 with that; right?
21 A. Right.
22 Q. So those are the areas. You found some in a white
bucket,
23 you found some prills, and you found it on the paper?
24 A. And outside.
25 Q. And outside. That's the prills I'm referring to.
The

11581

Steven Burmeister - Cross

1 prills were in that little vial. Right? Now, did you
see any

2 on the lawn?

3 A. I don't recall seeing any on the lawn.

4 Q. Where did you find those prills?

5 A. They were on the steps of the porch and on the
porch area

6 of the front exterior of the house.

7 Q. Okay. And you tested those and found they were
ammonium

8 nitrate; correct?

9 A. Yes.

10 Q. Now, had you, before you went there, discussed with
the FBI

11 what Mr. Nichols had said about him spreading ammonium
nitrate

12 on his front yard?

13 A. No.

14 Q. So the finding of the prills was not something that
you had

15 anticipated based on your briefing; is that correct?

16 A. Yes.

17 Q. Now, when you -- by the way, when you tested -- did
these

18 tests -- you said there came a time when you used --
you

19 compared ammonium nitrate against a known sample;
correct?

20 That is, you compared what you thought -- what you got
off Q507

21 with a known sample; right?

22 A. That would have been part of the examination

process.

23 Q. Which part of the examination process was that?

24 A. It would have started back up when I was doing the
ion

25 chromatography. There would have been solutions
prepared using

11582

Steven Burmeister - Cross

1 known ammonium nitrate.

2 Q. And at what -- let's put this back up here,
Government's

3 1744, for demonstrative purposes, if I may, and zoom
out. You

4 said that you started using it when you started doing
ion

5 chromatography. Correct? Down here?

6 A. Yes.

7 Q. That test. Let's see if I can make it focus.

8 I can't. We'll go in a ways.

9 There. Ion chromatography. Need a little
more.

10 So you had in your laboratory at that time,
then, some

11 ammonium nitrate you had acquired from elsewhere. Is
that

12 right?

13 A. Yes.

14 Q. And how did you know it was ammonium nitrate? From

the

15 package?

that

16 A. It had been labeled as such and previous testing on

17 particular item.

for

18 Q. And that's what you used to establish your baseline

19 your tests; correct?

standard.

20 A. It's not so much a baseline. It's used as a

to look

21 Q. Now, when you -- you said you removed some crystals

were on the

22 at. Correct? How many crystals do you think there

23 surface of this 664?

24 A. Crystals of ammonium nitrate?

25 Q. Yes.

11583

Steven Burmeister - Cross

1 A. I'm not sure.

talking

2 Q. Well, do you have an estimate? I mean, are we

3 hundreds, dozens, what?

crystals on

4 A. I really can't give -- there were quite a few

an exact

5 there. Giving an exact number -- I couldn't give you

6 number.

7 Q. Can you tell me about how much weight of crystals
there

8 would be? Did you attempt to estimate that?

9 A. No.

10 Q. Now, is it your conclusion, sir, that the crystals
were

11 blasted onto this surface of Government's Exhibit 664?

12 A. There was -- it's my opinion that some sort of
force

13 applied the crystals -- some of the crystals that are
on that

14 surface.

15 Q. Okay. Now, is there any other piece of witness
material

16 from inside the Murrah Building, outside the Murrah
Building,

17 in the parking lot, anywhere within a radius of that
blast site

18 in which crystals of ammonium nitrate were found?

19 A. No.

20 Q. Is there any other thing from that area in which
any

21 ammonium nitrate in any form was found?

22 A. No.

23 MR. TIGAR: Your Honor, if we could take the
luncheon

24 recess now, I could look at my notes and be done very
quickly.

25 I just want to make sure I didn't miss anything, but --

1 THE COURT: All right.

2 MR. TIGAR: If I may, your Honor. Thank you.

3 THE COURT: Yes.

4 MR. TIGAR: I'm almost done, Agent Burmeister
and your
5 Honor.

6 THE COURT: You may step down, Agent
Burmeister.

7 We will take our noon recess at this time,
members of
8 the jury, for the usual 90-minute period with the usual
9 cautions and instructions to avoid discussion of any of
the
10 witnesses or any of the evidence or any of the conduct
of the
11 Judge during this time, staying away from the contents
of the
12 case till the case is given to you for decision. And
keep open
13 minds and stay away from anything outside the evidence.

14 You're excused now, 1:30.

15 (Jury out at 11:59 a.m.)

16 THE COURT: All right. 1:30.

17 (Recess at 12:00 p.m.)

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1 REPORTERS' CERTIFICATE

2 We certify that the foregoing is a correct
transcript from

3 the record of proceedings in the above-entitled matter.

Dated

4 at Denver, Colorado, this 1st day of December, 1997.

5

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Paul Zuckerman

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Kara Spitler

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