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V I R G I N I A:

IN THE CIRCUIT COURT
FOR THE COUNTY OF ROANOKE

COMMONWEALTH OF VIRGINIA, :

Plaintiff :

-vs- :

CASE NO.: CR96-743 - 750

EARL CONRAD BRAMBLETT, :

Defendant

TRIAL - OCTOBER 28, 1997

VOLUME XI

HEARD BEFORE:

THE HONORABLE ROY B. WILLETT

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THE COURT: Thank you, sir; do not discuss your testimony during the remainder of the trial. You may be needed again. You are excused for now.
(Thereupon, the witness was excused.)

MR. BURKART: Your Honor, we are ready to go with another witness, or I didn't know if the Jury wanted to take a stretch break before we did that. However the - - -

THE COURT: Does anybody want a break? Apparently not.

MR. BURKART: I call Charlie Peters.

CHARLES PETERS

was called as a witness, duly sworn, and testified as follows:

DIRECT EXAMINATION

BY MR. BURKART:

Q If you would, please state your name for the Court.

A Charles A. Peters.

Q Mr. Peters, what is your occupation?

A I am a physical scientist.

1 Q Who do you work for?

2 A The Federal Bureau of Investigation.

3 Q How long have you been employed with the
4 Federal Bureau of Investigation?

5 A Some 22 years.

6 Q What, exactly, are your duties with the FBI?

7 A I am assigned in the laboratory, the Scientific
8 ic Analysis Section, the Materials and Devices Unit, and
9 then I am in the Elemental Analysis Group, where I perform
10 elemental analysis of things such as boat lead. I do
11 exams such as arsenic poisonings, cadmium poisonings. I
12 do a lot of metals work where we compare steels, like pipe
13 bomb, where you compare the steel in known samples of pipe
14 to the bomb itself.

15 Anything that has to do with the analysis of
16 metals and what you may be familiar with if you went to
17 high school and saw the periodic table, we specifically
18 look for those elements and quantify them.

19 MR. DOUBLES: Are you going to qualify him
20 as a comparative lead analysis expert or something of
21 that nature?

22 MR. BURKART: That is correct.

23 MR. DOUBLES: All right, we can stipulate to
24 that.

25 THE COURT: All right, this witness is deemed

1 to be an expert in the field of metal analysis.

2 MR. BURKART: Metal analysis, particularly
3 bullet lead analysis.

4 THE COURT: The Jury should accept his
5 testimony in that regard.

6

7 BY MR. BURKART:

8 Q Can you tell us something about bullet analy-
9 sis and what is the basis for this - - - You are qualified
10 as an expert. What is the basis for the study of bullet
11 analysis? How do you do it?

12 A The basis behind bullet lead analysis is that
13 the manufacturer, when they produce bullets, they start
14 out with a melt of lead, and they specify to the lead
15 smelter, most manufacturers do not melt their own lead,
16 per se; they go to a smelter, which melts the lead, and
17 they specify the amount of antimony they want in the lead,
18 and this is for hardness of the bullet, but the basis
19 behind it is that you have this caldron of lead or pot of
20 lead, so to speak, in a hot molten form, and they pour it
21 out into what they call billets, and these billets are
22 just round cylinders of solidified lead.

23 They weigh between 80 and 120 pounds, and at
24 the time they are solidified, the elements are fixed in
25 that melt. They are not compounded with anything. They

1 are just distributed throughout the melt, and the one
2 element they are specifying is antimony for hardness, but
3 the other elements that end up in the bullet lead are just
4 there as trace elements or tramps in the lead.

5 Every time that a new melt of lead is made, it
6 has its own characteristic signature by the number of
7 elements that are there and how much each of those ele-
8 ments are there.

9 So every heat of lead has its own unique
10 characteristics as far as composition. What studies have
11 shown, starting back in the sixties, that if we identify
12 four of these elements and quantify them to a good degree
13 of certainty, we can say that heat of lead is unique.

14 So how this has to do with a case such as
15 this, if we have victim bullets or victim fragments of
16 lead that you can't even tell that they are bullets, is
17 there anything else that we can do with those to compare
18 them to, say, a source, and the source would be some
19 cartridges or something that can be associated with a
20 suspect.

21 So, basically, what we do is we take the
22 victim fragments or bullets; we analyze these, and we
23 compare them to cartridges or the bullets from the car-
24 tridges analytically and see what elements are present in
25 the lead and how much of each of these elements are there.

1 If they are the same in composition, that
2 means if we have at least four or five elements, the
3 number, the percentage of that element is the same in
4 those things, it tells us that it came from the same melt
5 of lead.

6 Once we know that and we know the cartridge
7 that they came from, then we can identify the manufactur-
8 er. So we can say it came from the same heat of lead; it
9 was manufactured at Federal or CCI or Remington or Winche-
10 ster on or about the same time.

11 So we went from not knowing much about this
12 fragment of lead to saying that this piece of lead was
13 manufactured at a particular manufacturer on or about a
14 particular date, and that is what it is all about.

15 Q Now, before I go into some other questions,
16 just to make sure I understand it, and, hopefully, the
17 Jury understands it, you not only do this in bullets, but
18 you gave your example like pipeline where you will break
19 down the elemental composition of pieces of metal from
20 pipes or victims or shrapnel or whatever and be able to
21 tell if it came from the same pipe, the same source; is
22 that correct?

23 A That is correct.

24 Q When you were talking about, an individual, I
25 think you used the word heat of lead, I guess that is a

1 run or a manufacture of a pot of lead, that in addition to
2 the manufacturer specifying the percentage of antimony for
3 the hardness in the lead, there are also other elements,
4 like what?

5 A Silver, copper, bismuth, tin, arsenic, and
6 cadmium.

7 Q All those things are found within what we call
8 a lead bullet?

9 A Yes.

10 Q Okay, now, in this particular case, and we
11 want to get together the specific items that were submit-
12 ted to you for analysis, but in this particular case we
13 are dealing, apparently, with CCI bullets that were given
14 to you; is that correct?

15 A Yes.

16 Q All right, what is CCI and where are they
17 located, and have you been out there? Have you seen how
18 they make their bullets and what they do?

19 A CCI is a subsidiary of Blount Industries.
20 They manufacture bullets, cartridges. They sell them
21 commercially all throughout the United States and the
22 world. They are located in Idaho. I have visited the
23 plant and seen the manufacturing process of bullet making,
24 which, basically, involves the lead smelter will deliver
25 these billets of lead, the round cylinders I talked about.

1 These round cylinders will be placed in a
2 machine that is nothing more than a plunger with a funnel
3 on the end, and they force the solid lead through that
4 funnel into the size of wire of the caliber bullet that
5 they want to produce.

6 So they are extruding it just like a noodle
7 coming out. They take this wire and they feed it into
8 another machine and it cuts off slugs, the cylindrical
9 wire, and these slugs are then put into great big graphite
10 drums, drums, and they spray graphite in there and they
11 roll them to take all the rough edges off of the slugs,
12 and then each of these slugs are placed in a wedging
13 machine or molding machines, and that forms what you know
14 as what a bullet looks like.

15 Then from there they will go into various
16 processes. If it is a lead bullet, they will just go and
17 be loaded into the cartridge cases with the gunpowder and
18 the cartridge case. If they are going to be coated, like
19 in this case the bullets are full metal plated, they go
20 into a copper cyanide bath, where copper is electrolyti-
21 cally plated on the outside of the bullets.

22 After that they will be loaded into cartridge
23 cases, and that means that they will take the cartridge
24 case that has a primer, the lead azide that is very explo-
25 sive, in the primer or the cartridge case, and they will

1 load it with gunpowder, which burns, and you put the
2 bullet in there, and that is what we call a cartridge, and
3 those will be loaded into boxes, and the date is stamped
4 at the time they are loaded into boxes and distributed
5 throughout the United States.

6 Q Do you think it is important for your analysis
7 to visit these plants to see how these different manufac-
8 turing processes go about to understand what is going
9 on?

10 A It certainly is. Different manufacturers will
11 have different compositions within a box of ammunition,
12 and this is easily explained by watching the manufacturing
13 process.

14 As an example of what I am talking about, the
15 Federal manufacturer up in Minnesota, they do very little
16 storage of components for their bullets. So the bullets
17 are made, basically, and they go from being made into
18 loaded into cartridge cases and in Federal Ammunition we
19 will see one or two distinct compositions within a box.

20 Now - - -

21 Q What about CCI?

22 A In the case of CCI, we will see five distinct
23 compositions in boxes, and that is explained; the bullets
24 are made from different melts of lead and then stored and
25 then at a certain time they will take these stored bullets

1 and load them into the cartridge cases, and so at CCI we
2 will see five distinct compositions.

3 Now, these are minor compositions. They are
4 very close to each other, but we can distinguish with our
5 instrumentation that we are using the difference between
6 the melts.

7 Q Is .22 Magnum, which is the caliber we have
8 here, is that, as far as the number of bullets manufac-
9 tured in comparison to others, is that a highly manufac-
10 tured bullet, numberwise, as compared to .357's and every-
11 thing else manufactured?

12 A It is very low volume certainly compared to
13 .22 long rifles, which they produce about five billion a
14 year in the United States, and then other things that - -

15 Q That is .22 long rifles?

16 A Yes, and then other ammunition, such as the
17 nine millimeter, which is so prevalent today, and the
18 semi-automatic weapons that we see would be the next
19 biggest volume of bullets produced.

20 As far as .357's, several years ago that was
21 pretty high volume, but we are seeing less and less of
22 that today with the nine millimeter taking over.

23 Q The .22 Magnum is not, as far as - - - There
24 are a lot of bullets manufactured, but in comparison to
25 the others, it is not a particularly popular cartridge?

1 A No; it is more expensive to make, so they
2 prefer to use - - - People who do target shooting and
3 stuff would prefer to use the .22 long rifle.

4 Q All right, when you are given bullets to
5 compare, what analysis do you do? How do you determine
6 what the content is?

7 A Basically, what we do, the method I do is a
8 destructive method. We take a sample out of the bullets
9 and out of the cartridges which we are comparing. Basi-
10 cally, what this entails is to take wire snippers and we
11 snip the tip off of the bullet or any area that doesn't
12 seem to have rifling characteristics that anybody could do
13 anything with on the victim bullets. We clean these
14 snippers between each bullet that we analyze, and then
15 once we get one sample from the bullet, we cut that sample
16 into three separate samples.

17 We try to get three samplings from each bullet
18 and analyze actually three samples from each bullet or
19 each cartridge. Then it requires a cleaning up process,
20 particularly in this case, because they are copper jacket-
21 ed. We have to clean the copper off because we are inter-
22 ested, copper is one of the trace elements in the lead
23 that we are interested in, and we do that by just looking
24 under a microscope, maybe a 4-X microscope that, you know,
25 magnifies it four times, and use a clean scalpel blade and

1 get under there and actually clean off all the exterior
2 surface of the lead.

3 After that we take about 50 milligram samples.
4 We weigh then on micro balances, very precisely. This
5 piece of lead is then dissolved with 20 percent nitrite
6 acid. It goes into a clear solution. It is as clear as a
7 water solution. So we know the weight of the sample that
8 we took. We know the volume of nitrite acid we dissolved
9 it in, and then all that is left to do is analyze it on
10 analytical instrumentation that can analyze for the ele-
11 ments that we want to look at.

12 This instrumentation that we use today is
13 called inductively coupled plasma atomic emission
14 spectroscopy. Very simply, all it is is a hot ionized
15 gas, which is argon. It is about 5,000 degrees centi-
16 grade. It is created by a radial frequency. This radial
17 frequency excites the argon atoms, so it is a very hot
18 gas. 5,000 degrees centigrade is very hot.

19 We take this solution and we do what we call
20 nebulize it, or it is just like a hose nozzle on your hose
21 that sprays out a mist into this very hot torch. The
22 sample goes up into the hot zone, and all the atoms are
23 separated, and not only are they separated; they are
24 excited. Atoms don't like to be excited, so as a drop
25 down from excited state to ground state, which is a stable

1 state of atoms, they light, and then we have the spectrom-
2 eter on the end of this hot torch and the spectrometer is
3 just a spectrometer that can tell each of the wave
4 lengths. It is just like you can dial in a wave length
5 on your radio at home; we can dial in wave lengths of
6 light on this instrument.

7 So each element has its own characteristic
8 wave length. So antimony has a wave length; copper has a
9 wave length. So we can identify what is there by the wave
10 length and by the intensity of the wave length, and that
11 means how bright the light is giving off from that wave
12 length, we can tell exactly how much is there.

13 So we have known standards that we get from
14 the National Institute of Science and Technology in
15 Gaithersburg, Maryland, a known lead standard that has
16 these elements in it, and we use that to calibrate the
17 instrument, and we can tell quantitatively exactly what
18 elements are there and how much of each element is there,
19 and we deal with things in percentages, like percentage
20 antimony and then some of the elements we look for, we
21 actually deal in parts per million. That would be the
22 number of parts per million of this element in the lead
23 sample that we analyzed.

24 Q All right, Charlie, I just feel like I was in
25 science class and got lost again. I would have to raise

1 my hand and ask you. What you basically said, you took
2 three samples from each individual bullet; is that cor-
3 rect?

4 A Yes.

5 Q And you get three samples so you make sure
6 each of the readings are accurate for each individual
7 bullet?

8 A Yes.

9 Q You run them through this machine, which I
10 cannot pronounce, and all this stuff happens to the atoms
11 and the rest of that. You run three samples for each
12 bullet and you come to a conclusion as to the percentage
13 of the different metals that make up that particular lead
14 bullet?

15 A Yes, that is correct.

16 Q Now, let's get down to some specifics. I
17 would like to show you this and ask you if this was
18 brought to your lab by Agent Keesee on October 12. You
19 will probably have to open this up and tell us what items
20 are in there that you examined.

21 A The only item in this sack that I looked at
22 was what I designated as Q-8.

23 Q That is correct. When you received this, it
24 appears to be a cartridge case, cooper jacketed, fragment-
25 ed pieces of lead and powder. Was this an entire intact

1 case when you received it?

2 A Yes, this would have been a cartridge which
3 would be the cartridge case, the gunpowder, the bullet,
4 all loaded into one. My identifying marks on the evidence
5 is our laboratory number, which tells us that it came into
6 the laboratory in 1984, the 10th month.

7 Q 1984 or 1994?

8 A 1994, thank you, the 10th month, the 12th day,
9 and it was the 26th case we received in our laboratory
10 that day, and my laboratory initials GK are on the evi-
11 dence.

12 MR. BURKART: Okay, now, I know this has been
13 getting somewhat confusing to the Jury. Your Honor,
14 this item marked Six-E, which has already been
15 marked in total as an Exhibit, Commonwealth's
16 Exhibit Number 155, the Arminius and the enclosed
17 casings. I have already displayed this to the Jury
18 as the live cartridge that was in the gun.

19

20 BY MR. BURKART:

21 Q Charlie, you did this, cutting the bullet up
22 and taking it apart, as you have described earlier; is
23 that correct?

24 A Yes; if you - - -

25 Q You can approach the Jury if you need to.

1 A If you can see, basically, the bullet was
2 pulled. We do this with what looks like a hammer, but it
3 is hollowed out on the inside. It holds the cartridge at
4 the very top and if you hammer on it real hard, actually,
5 the bullet comes out. The copper coating of the bullet
6 was removed, and you can see the small fragments of lead
7 and that is just from cleaning up the bullet lead to get
8 our three pristine samples for analysis.

9 Q Once you do your samples through that machine,
10 it basically vaporizes; they are gone, is that right?

11 A That is correct.

12 Q Now, one other question before we move on.
13 You have FBI Item Q-8, which we have as our Item 6-E. Is
14 that this item here?

15 A Yes.

16 Q I asked you to go back, you went back yester-
17 day to put these little florescent orange stickers on it
18 to make sure we are not confusing it, that we know which
19 one it is. This one, 6-E, is Q-8 in the revolver?

20 A Yes.

21 Q Mr. Peters, I am going to show you an item
22 that has been marked as Commonwealth's Exhibit Number 159,
23 previously testified to. Would you open that up and
24 examine it and see if that was one of the other items that
25 was submitted to you from Agent Keesee at that time.

1 A Yes, here again, our laboratory number, my
2 laboratory initials, laboratory Q-9 designation. After we
3 are done with this, as you can see, we heat seal the
4 components, the gunpowder, the cartridge case and whatever
5 is remaining of the bullets. So this could be re-analyzed
6 by other people at a later time who will get the exact
7 numbers that we got in this case.

8 Q All right, and for our purposes to the Jury,
9 your Q-9 here is identified as Item Number 32, the item
10 recovered on the stairs?

11 A Yes.

12 Q I would like to show you these five items,
13 which are identified for your purposes, and I will identi-
14 fy them in a minute, as Q-3, your Q-3 is our Common-
15 wealth's Exhibit 156, exit wound from the victim Anna.
16 Your Q-4 is Commonwealth's Exhibit 158 for purposes of the
17 Record, another exit bullet from Anna.

18 Your Q-5 has been already marked and entered
19 as Commonwealth's Exhibit Number 157, exit bullet from
20 Winter Hodges. Your Q-6 has already been identified as a
21 .22 caliber removed from the autopsy of Blaine Hodges,
22 Commonwealth's Exhibit Number 73, and your Q-7 is Common-
23 wealth's Exhibit 76, a bullet recovered from autopsy of
24 Winter Hodges. I would ask you if you - - - I don't know
25 if you need to open those packages or not, but look at

1 them and ask if you received those five bullets for exami-
2 nation at the same time delivered by Agent Keesee?

3 A Yes, they all have my markings, my initials.

4 Q Mr. Peters, I hope everybody in the Jury can
5 see. These items, these recovered bullets that you just
6 testified about are Item Seven from Anna is your Q-3, our
7 Item Nine from Anna is your Q-4, our Item 102 from Winter
8 is Q-7, our Item 8 from Winter is Q-5, and our Item Q-6
9 from Blaine's autopsy is Q-6, is that correct, our Item
10 101 is your Q-6; is that right?

11 A Yes.

12 Q And you and I got together to put these stick-
13 ers on last night just so we would make sure we are not
14 confusing the Jury since the numbering system is differ-
15 ent?

16 A Yes.

17 Q And those are the same bullets and you ana-
18 lyzed all of them?

19 A Yes.

20 Q Now, I would also like to show you what we
21 have previously called our Item Number One. It has been
22 marked as Commonwealth's Exhibit, marked and entered as
23 Commonwealth's Exhibit Number 144. You have it as your
24 Item Q-14, allegedly recovered, identified as being recov-
25 ered from the storage room of Mr. Bramblett. Did you have

1 occasion to see that item?

2 A Let me examine it. Here again, the product of
3 my work, heat sealed, the laboratory number and my ini-
4 tials.

5 Q You also received that from Agent Keesee at
6 the same time you received these other cartridges and
7 fired bullets and the cartridges you have testified about?

8 A That is correct.

9 Q Mr. Peters, I would like to show you one other
10 Exhibit before we get to your findings. I would like to
11 show you an item that has four cases, which I don't be-
12 lieve you saw, the four Magnum cartridges. Your Honor,
13 this has been identified previously and marked as
14 Commonwealth's Exhibit Number 127 as being recovered from
15 the pickup truck of Mr. Bramblett. Would you see whether
16 or not you received those items and examined them on the
17 same day, at the same time?

18 A Yes, I received these also, as identified by
19 our laboratory number and my lab initials.

20 MR. BURKART: Your Honor, those items have
21 already been identified and marked as Commonwealth's
22 Exhibit 127.

23

24

25

1 BY MR. BURKART:

2 Q Your numbers for that purpose, Mr. Peters, are
3 Q-10, Q-11, Q-12, and Q-13 as shown on this chart here; is
4 that correct?

5 A Yes.

6 Q All right, now, these red squares around
7 these, these are the items, these indicated the items that
8 were sent to you for an analysis of bullet lead; is that
9 correct? Those are all the items that were sent to you?

10 A Yes.

11 Q And the actual items are in front of you?

12 A Yes, they are.

13 Q Now, can you tell us what your findings are,
14 and what does this mean? What did you find from these
15 bullets? What did your analysis show?

16 A May I check my notes?

17 Q Absolutely; do you have your chart?

18 A No, I don't.

19 Q Do you want it?

20 A Sure; thank you. What we found was this
21 cartridge that was reportedly from the receiver of the
22 handgun matches in composition or its chemistry is analyt-
23 ically indistinguishable to these three victim bullets,
24 which is Q-3, Q-4, and Q-7, or Items 7, 9, and 102.

25 Q Those are analytically indistinguishable?

1 A That means to me as a lay person that if you
2 would give me any of these bullets, physically, I couldn't
3 tell them apart, and I would re-analyze them on the in-
4 strumentation we used, which, for short, is called ICP,
5 for obvious reasons, I could not tell those apart.

6 Q Now, I am going to ask you to do me a favor,
7 Mr. Peters. Take this black marker and group that group
8 that is indistinguishable.

9 A (Witness complies.)

10 Q Thank you. Now, what else did your analysis
11 reveal to you?

12 A The other analysis, the same analysis revealed
13 that these two victim bullets, Item 101 and Item Eight,
14 matched in composition to Item 91, which was reportedly
15 found in a storage shed. So these two victim bullets and
16 this cartridge, or the bullet in the cartridge, is analyt-
17 ically indistinguishable, or matches in composition to
18 each other.

19 Q Would you like to draw that, or do you want me
20 to do it for you?

21 A You can do it for me.

22 Q Is that correct, the way I drew that? Those
23 bullets there from the storage units and from the victims
24 are analytically indistinguishable?

25 A Yes.

1 Q Go ahead; did you find anything else from your
2 analysis?

3 A There was also a cartridge reportedly to me
4 from the steps or stairs in the house where the victim - -

5 Q That is your Q-9?

6 A Or Item 32; this matched in composition to two
7 of the cartridges from the suspect's vehicle, which was
8 Q-10 and 12, which happened to be Items 53-E and 53-G.

9 Q Again, these three bullets were, from your
10 analysis, analytically indistinguishable?

11 A Yes.

12 Q Do you want me to draw it for you?

13 A Yes, please.

14 Q Is that accurate as far as grouping those
15 items together?

16 A Yes.

17 Q Those were indistinguishable?

18 A Yes.

19 Q What else did your findings reveal?

20 A The other thing our findings revealed was that
21 this cartridge and this cartridge, although consistent or
22 close in composition, did not match each other or did not
23 compositionally match any of the other bullets or car-
24 tridges that were recovered in this case.

25 Q You are saying, basically, these, these, and

1 these different groups, that they are all identical,
2 analytically identical; is that correct?

3 A Within each group they are analytically - -

4 Q But there are slight variations between this
5 group and this group and this group, and the variations
6 between each of these and these two are slight, also; is
7 that not correct?

8 A Yes.

9 Q Now, you talked about CCI, the manufacturer,
10 and visiting their plant and observing their manufacturing
11 process. Would it be unusual for you to find in a single
12 box of shells shells that had five different, slightly
13 different chemical compositions within the same box of
14 shells from CCI, the manufacturer?

15 A This is typically what we find, and over my
16 years of experience at the FBI where I have analyzed tens
17 of thousands of bullets, a portion of which are partial
18 boxes or full boxes of CCI, this is the type of thing we
19 will see with CCI ammunition, five or six compositions
20 within a box.

21 Q Okay, now, had we been dealing with Federal
22 ammunition or some other manufacturers that you have
23 testified you have seen their manufacturing process and
24 the way they do it, would you find this unusual had this
25 been Federal Manufacture, for them to be four or five

1 different analyses?

2 A It would be unusual for like Federal if they
3 would have all came from the same box. Obviously, some-
4 times you get in cases and you don't know, they may have
5 used several different boxes of ammunition, and you have
6 no control of that.

7 Q But Federal is consistent, Remington is con-
8 sistent, Winchester seems to be consistent, but CCI
9 through their process are not?

10 A Could you please repeat that?

11 Q Federal, Winchester - - -

12 MR. DOUBLES: Your Honor, I am going
13 to object. I think Mr. Burkart is testifying at
14 this point.

15 THE COURT: Sustained.

16

17 BY MR. BURKART:

18 Q Are other manufacturers consistent in keeping
19 the same bullet lead within their boxes, as opposed to
20 CCI, or can you answer that?

21 A I am not sure what you are asking. I am
22 sorry.

23 Q You identified the Federal process earlier as
24 they would do one run so the lead would be consistent; is
25 that correct?

1 A Yes.

2 Q And other manufacturers appeared to do one run
3 and they are consistent; is that correct?

4 A Analysis of the ammunition shows us that
5 Federal ammunition seems to have one or two compositions
6 within boxes. CCI and Remington seems to have five or six
7 compositions within a box, and Winchester, which is another
8 popular brand, can have 11 or 12 compositions within a
9 box.

10 Q So that is not unusual to find varied compositions
11 within one box of ammunition?

12 A No, it is not, and that is easily explained by
13 looking at the manufacturing process, and this mixing of
14 different melts of lead that bullets are made from, the
15 bullets are made and they are stored, so you have, basically,
16 different melts of lead stored as bullets, and then
17 they are being mixed during the loading process, and this
18 loading process is when they go into the cartridge cases.

19 Q Were you able to determine from your analysis,
20 were you able to make any conclusions about the significance
21 of these different leads that were recovered?

22 A The significance of this is a narrowing down
23 process. What we have here is we have bullets that we
24 can't identify with a barrel of a gun because we don't
25 have anything.

1 So the next best thing we can do, is there
2 anything we can do to compare them to some cartridges that
3 were received from a suspect, and the answer is yes. We
4 did that; we have these victim bullets, and we found it to
5 be analytically indistinguishable to one of the cartridges
6 from the receiver.

7 That tells me, and this happened to be CCI, so
8 what we know is that these three bullets and this car-
9 tridge was manufactured by CCI on or about the same date,
10 and we can say that for the other associations here, also,
11 that the one found on the step was made from the same melt
12 of lead on or about the same date as two of the cartridges
13 recovered from the suspect's vehicle, and that these two
14 victim bullets came from the same melt of lead as this
15 cartridge that was recovered from a storage shed.

16 So we have narrowed it down from all of the
17 bullets that are made in the United States year after
18 year, somewhere up near nine billion now, to one day at
19 CCI, one or two days at CCI. You know, they cross over
20 several days in this type of stuff, and I think that is
21 significant. We have narrowed it down to that.

22 Now, again, we are not saying that other
23 bullets - - - There are other bullets that are produced in
24 heat that will have these same compositions; we are not
25 denying that, and those numbers can be pretty big. You

1 know, a half million to a million bullets could be pro-
2 duced from one melt of lead. We are not saying that, but
3 what we are saying is that we have narrowed down these
4 bullets to be manufactured at CCI on or about the same
5 day.

6 MR. BURKART: Thank you.

7 THE COURT: All right, Mr. Doubles.

8
9 CROSS EXAMINATION

10
11 BY MR. DOUBLES:

12 Q As I understand it, these bullets are indis-
13 tinguishable chemically from one another, and they come
14 from one melt of lead?

15 A That is correct.

16 Q And one melt of lead will produce between a-
17 half a million and a million .22 caliber bullets?

18 A Somewhere around there.

19 Q Somewhere in that range. These three come
20 from a separate melt of lead; they are chemically indis-
21 tinguishable from one another; correct?

22 A Yes.

23 Q That is another half a million to a million
24 .22 caliber bullets?

25 A That is correct.

1 Q These three, there is a third melt of lead,
2 same, half a million to a million .22 caliber bullets;
3 53-F or Q-11 is another completely separate melt of lead
4 and another half a million to a million .22 caliber bul-
5 lets, and Q-13, I guess, is the fifth melt of lead that
6 you were dealing with, and it is another half a million to
7 a million .22 caliber bullets; is that fair to say?

8 A Yes.

9 Q So we have got five separate melts of lead
10 that you analyzed in this group. You analyzed what was
11 provided to you; correct?

12 A Yes.

13 Q You didn't go out to K-Mart or Wal-Mart or
14 anything like that and get bullets and do a comparison
15 there; correct?

16 A No.

17 Q You indicated that these bullets were manufac-
18 tured on the same day or two of manufacturing at CCI?

19 A Yes.

20 Q If I understand the manufacturing process,
21 they don't make one .22 caliber bullet and then move on to
22 a .357 and a .300 Winchester Magnum; they make a bunch of
23 .22 caliber bullets. They tool up for one caliber at a
24 time, basically?

25 A Yes.

1 Q And they run that through, make whatever lot
2 they are going to make, and then ship it out to the people
3 that sell those for them; correct?

4 A That is correct.

5 Q And you would expect to find this type of
6 composition not only in a single box of shells made at
7 that time, but in a case of boxes of shells, I guess if
8 you would, that were made at the same time?

9 A Yes.

10 Q And I guess a truckload that was done at the
11 same time; that would be consistent with that; correct?

12 A If they were from the same melt, yes.

13 Q Yes, sir.

14 MR. DOUBLES: Thank you, sir; I don't have
15 any other questions.

16

17 REDIRECT EXAMINATION

18

19 BY MR. BURKART:

20 Q Just one question, the supply of bullets after
21 they are manufactured is constantly dwindling, is it not?

22 A That is correct.

23 Q Why is that?

24 A Well, just from obvious things. The bullet
25 manufacturers would go out of business if people did not

1 buy bullets and shoot them up. So it becomes even more
2 significant, this type of analysis, if you can show, or if
3 you have a box of ammunition that has the same composition
4 that, say, the victim bullets have.

5 As an example, if we had a box of bullets in
6 this case, in any case, and it was made back in 1983,
7 there would not be in 1997 very many of those rounds left
8 because the minute that they are produced there may be a
9 million bullets, and people buy these cartridges to fire
10 them. So in a very short time, there being shots, and the
11 obvious thing from this is that bullet manufacturers would
12 go out of business if people did not buy ammunition and
13 shoot it.

14 MR. BURKART: Thank you, Charlie.

15

16 RE CROSS EXAMINATION

17

18 BY MR. DOUBLES:

19 Q But at the time they are bought, manufactured
20 and sent to the distributors, there would be a whole bunch
21 around?

22 A That is correct.

23 MR. DOUBLES: Thank you.

24 THE COURT: May he be excused?

25 MR. BURKART: Yes, Your Honor.

1 THE COURT: Thank you, sir; don't discuss your
2 testimony in the course of the remainder of the
3 trial. You are free to go. We appreciate your
4 presence.

5 MR. BURKART: Donna, what Exhibit number are
6 we on?

7 MR. LEACH: 184, I believe.

8 MR. BURKART: I would move to have that
9 chart marked and entered as Commonwealth's Exhibit
10 184.

11 THE COURT: Any objection to that?

12 MR. DOUBLES: No, sir.

13 THE COURT: All right, that will be admitted
14 as Exhibit Number 184. The witness is excused, and
15 and we will take a brief recess.

16 (Thereupon, the witness was excused.)

17 (Thereupon, the Jury was taken to the
18 Jury Room, and the following Proceedings were
19 had out of the presence of the Jury:)

20
21 THE COURT: Here is the cassette and tran-
22 script and notes of the interview that you subpoenaed.
23 I assume that witness is going to be called
24 shortly, since it is well past the time that you told
25 me you were going to call them.