

1 MR. LIBBY: I have nothing further, your Honor.

2 THE COURT: Thank you, Mr. Scheid, you are excused.

3 THE WITNESS: Thank you.

4 MR. LIBBY: Mr. Thomas Waskom, your Honor.

5 THE COURT: For the record, Mr. Waskom is still under
6 oath from his earlier appearance, he understands that.

7 Thomas Waskom, recalled

8 Direct Examination by Mr. Libby

9 Q The last piece of evidence that we'll get into before he
10 incorporates all of your earlier testimony, Mr. Waskom, you
11 are presently employed as what?

12 A I'm an explosives enforcement officer with the Explosives
13 Technology Branch of Alcohol, Tobacco & Firearms.

14 Q Keep your voice up, please. Pull your microphone towards
15 you there.

16 MR. LIBBY: If we can just incorporate by reference
17 your Honor, his earlier testimony with respect to the '91
18 device?

19 THE COURT: Yes.

20 Now if you are going to do that, I have to go
21 searching for my notes.

22 Q With respect to the 1986 Quincy, Massachusetts,
23 explosives incident that you saw here on the printout, the
24 EXIS data printout, are you familiar with that investigation?

25 A Yes, I am.

1 Q Can you tell Court what materials you looked at to
2 familiarize yourself with the incident?

3 A I looked at three reports, one handwritten report by
4 Detective Lanergan, actually, it would be his notes; one typed
5 report of the actions that Detective Lanergan and his partner
6 took on the day they were doing interviews.

7 Q Is that the three-page single-spaced-typewritten
8 Quincy PD report?

9 A Yes. And also the Massachusetts lab report of that
10 incident.

11 Q Prepared by whom, sir?

12 A Mr. Hankard.

13 THE COURT: I'm sorry, the first was the Detective
14 Lanergan report?

15 THE WITNESS: That is correct.

16 THE COURT: And the second?

17 THE WITNESS: The second was Detective Lanergan's,
18 it's a typed report. The first report was handwritten. The
19 second report was typed. And the third report is a
20 Massachusetts lab report by Mr. Hankard.

21 MS. GERTNER: Your Honor, I assume that when
22 Mr. Libby submits the offer of proof, in the form you
23 described it, you'll get these reports as they are, because we
24 would object to the use of some of these reports for the
25 purpose of reconstructing '86.

1 Now, in other words, the kind of position that you
2 have to take is a very, very refined analysis of '86 and '91
3 for the purposes of establishing signature. And what want to
4 make sure that the Court understands is that '86 data is
5 extraordinarily sketchy hobbled by the extent of
6 Mr. Trenkler's statements and further hobbled by the fact that
7 the physical evidence no longer exists and the man in charge
8 of it has died.

9 MR. LIBBY: I thought we were simply deferring
10 argument on this until later. If you want to be hard on this
11 now, I'll respond.

12 THE COURT: She's just asking me to be sceptical.

13 MR. LIBBY: Oh.

14 THE COURT: Right?

15 MS. GERTNER: Right.

16 MR. LIBBY: If we can have these three documents
17 marked.

18 [Government's Exhibits 8, 9 and 10 entered in
19 evidence.]

20 The single-page, Detective Lanergan notes will be the
21 next exhibit, followed by the 3-page Quincy PD report by
22 Detectives Lanergan and Tierney, followed by the Commonwealth
23 of Massachusetts crime lab assistant chief technician.

24 Q Do you see any real evidence relating to the '86 device?

25 A No, I did not see any physical evidence.

1 Q What's your understanding as to what happened with the
2 real evidence left from that explosives incident?

3 A My understanding of the evidence that after it had gone
4 through the lab analysis, once the case had been closed and,
5 and typical of many locations, after it's there for so long,
6 it is destroyed.

7 Q All right. Does the absence of that real evidence, sir,
8 in light of the information, written information, you have
9 left from that incident present an insurmountable obstacle to
10 you in forming an opinion as to the 1986 device?

11 MS. GERTNER: I object. I think I know the answer is
12 likely to be no. The issue, to extent it affects his opinion
13 is yours, not his.

14 MR. LIBBY: Simply responding to the point raised by
15 counsel.

16 THE COURT: He used information to draw certain
17 conclusions.

18 Q Now, have you reached an opinion, Mr. Waskom, with
19 respect to the 1986 device, talking about the '86, with
20 respect to the presence of particular components in that
21 device?

22 A Yes, I have.

23 MR. LIBBY: IF Mr. Waskom can come down, your Honor,
24 we have a schematic that will assist Mr. Waskom in explaining
25 this.

1 If you'll come down, Mr. Waskom.

2 Q Will you explain the difference between the red and the
3 yellow here on this exhibit, which we will refer to as
4 Exhibit 11 for the purposes of this hearing?

5 [Government Exhibit 11 entered in evidence.]

6 A The red markings show the --

7 Q You mean the yellow markings.

8 A The yellow markings show the wiring circuit used by
9 remote control system. The red markings show the wiring
10 system used on the firing side the device, basically, the
11 firing circuit itself.

12 Q So, the yellow is the so-called fusing circuit?

13 A Yes.

14 Q The red is the firing circuit?

15 A That is correct.

16 Q Now, will you explain to the Court, please, the presence
17 of each of the components, first, in the fuseing circuit, if
18 I've got that right, how do we know these various things are
19 present?

20 A Okay. In the 1986 lab report by Mr. Hankard, he talks
21 about a piece of black plastic containing one AA battery, and
22 the next line under that he talks about three other AA
23 batteries, telling us there were four AA batteries. The
24 markings that were on black plastic tells us it was a Tyco.
25 Toy is a car used for remote control systems. Tyco cars use

1 four AA batteries and a battery pack similar to the one shown
2 here. The.

3 Second thing that is in the system is a slide
4 switch. And it is the same on all remote control systems.
5 You have a slide switch which is a power on and off for your
6 remote control system to protect these batteries when the toy
7 is not in use.

8 The third thing it talks about is a small piece of
9 circuit board. Now, the circuit board is actually the
10 receiver, the Tyco receiver circuit board which is different
11 from the one in '91. The Tyco circuit board does not have its
12 own little casing; it's built inside the car. It doesn't come
13 in its own little box. It is a circuit board that's inside
14 this car when the car is put together. It also just like any
15 receiver has the antenna. And then the two wires go up, and
16 there's a relay.

17 Now, a relay is a switch that controls two other
18 circuits. It can turn on or off two outside circuits from
19 impulses given by the receiver.

20 Q And then that energizes the magnetic field inside the
21 relay, sir, is that it?

22 A Yes, what will happen is when the receiver receives, a
23 signal, it sends energy to this coil, and it basically makes
24 an electrical magnet out of this hard core iron that the wire
25 is wrapped around. So, you have an electrical magnet here,

1 you're either turning or turning off.

2 Q And the turn on and turnoff takes place when the magnetic
3 field pulls one of those switches towards the other?

4 A Right, when had the magnetic field, when this
5 electromagnet is energized, the common terminal -- the common
6 terminal on a relay switch is a the movable terminal -- will
7 pull down and make contact with the bottom contact. If the
8 magnet is not being energized, it goes back and make contacts
9 with the top contact.

10 Q Now, these are those are the components that are present
11 in the 1986 device in the fusing circuit, correct?

12 A That's correct.

13 Q Will you explain, sir, the firing circuit componentry?

14 A Okay. The firing circuit, as far as the components
15 itself, contains a toggle switch, contains a light bulb,
16 contains a main charge. This is the M 21 Hoffman device --

17 Q And let me stop you there.

18 How do we know there was a light bulb in the firing
19 circuit.

20 Q We know there was a light bulb in the firing circuit from
21 the typed statements from Detective Lanergan where he talks
22 about a light bulb being used to test the circuit.

23 Q And M 21 Hoffman, what is that?

24 A M 21 Hoffman device is a simulator for main gun tanks.
25 Military have tanks with anywhere from 90 millimeter for the

1 very old ones up to 120 millimeter main guns. In their
2 training, rather than shoot the expensive shells, also
3 explosive shells that go out, they use Hoffman devices. The
4 Hoffman simulates the gun firing. It doesn't shoot the shell
5 out. It just make the noises that would be made if the shell
6 were shot. It contains an igniter, it's an electrical device,
7 has two wires going in, contains an igniter, and has a photo
8 flash charge inside the main charge.

9 Q There are no detonator caps inside?

10 A No, there were no detonator caps.

11 Q It is electrical ignited, is that what you are saying?

12 A It is electrically initiated by an igniter.

13 Q How did you know it was an M 21 Hoffman in the 1986
14 device, please?

15 A From the lab report by Mr. Hankard, the first page of the
16 lab report, explains components that were recovered in the '86
17 device. And it talks about clear transparent plastic. It
18 talks about the type of explosive residue that was on this
19 plastic. It talks about certain shape and length of
20 cardboard. It talks about an outer, larger white plastic
21 housing, and certain features of it, like little ribs or
22 spines on it. It talks about white conductor, white wires.
23 And it talks about a two-prong clip. And if you, if you have
24 an M 21, and you read this report, it's line for line verbatim
25 with exactly how the M 21 is made.

1 THE COURT: What happens to this M 21 when the
2 electricity gets to it, the whole thing just comes apart.

3 THE WITNESS: Yes, ma'am it explodes. It's an
4 explosive device. THE M 21 is, outside looking, is a plastic
5 cylinder, approximately an inch and a half, inch and three
6 quarters in diameter, about four inches long. And inside of
7 it is an ounce and a half of photo flash powder that is
8 initiated by an igniter that is initiated by an electrical
9 impulse being introduced.

10 MR. LIBBY: If your Honor please.

11 Q I show you Exhibit 41, and I ask you what that is,
12 please.

13 A This is M an 21 Hoffman device after it has been cut open
14 and the charge has been taken out. And in Mr. Hankard's
15 report, he talks about this particular housing.

16 The report he talks about is a white conductor, two
17 leads. He talks about a white plastic plug. And he talks
18 about the plug having two prongs.

19 When he talks about the internal part of the M 21
20 Hoffman, he talks about a translucent plastic container. He
21 talks about a translucent plastic disk, I believe is the
22 terminology he uses. He gives the dimensions. The dimensions
23 are this container, which is the container that contains the
24 actual photo flash powder inside the M 21.

25 He also talks about a cylinder of cardboard, which is

1 this cylinder of cardboard that is packaged inside the M 21.

2 And probably the most identifiable comment he makes
3 is the little ribs that are on the inside of the container.
4 The inside of the plastic container has ribs.

5 Q Are there any other kind of simulators that have those
6 ribs?

7 A There is no other simulator, to my knowledge, that is
8 made of plastic, has these ribs and have these components.
9 This is the only electrical simulator anywhere close to this.

10 Q Do you have any difficulty opining that the debris
11 depicted on Mr. Hankard's, the first page of Mr. Hankard's ATF
12 report, was in fact an M 21?

13 A No problem whatsoever.

14 Q Leaving that aside for the moment, Mr. Waskom, and
15 forging ahead here, you left the firing circuit.

16 Now, I don't believe you mentioned anything about the
17 battery array.

18 A Mr. Hankard's Massachusetts lab report talks about the
19 two 6- volt size J Duracell batteries. They are a specific
20 type of battery.

21 Q Okay.

22 Now, you talked about the presence of these various
23 components in the circuits. How do you know, what do you base
24 your opinion that they are wired together in the fashion you
25 see here?

1 A Well, the Tyco remote control system is kind of a package
2 deal. You buy it the way it is. It has this component and
3 this component and this component, and those components are
4 also described later on.

5 The initial opinion of some of the people who looked
6 at it, that the toggle switch was down in this location --

7 Q When you say "location," do you mean physically or in the
8 firing circuit?

9 A In the fire firing circuit. There was some question
10 initially from the reports on this toggle switch, and the
11 reports were basically hinting that this toggle switch was
12 here, located in the receiver circuit. In looking at the
13 reports and understanding the devices and seeing many remote
14 control devices, I know that it would make no sense whatsoever
15 to put two on and off switches in the same line. It means you
16 have to turn on two different switches to get anything done,
17 and at that you have nothing, no switch to fire this M 21
18 Hoffman.

19 The only place that that toggle switch could be, the
20 only logical location for it, is right here in this firing
21 circuit. That's what it's purpose was. It was in the firing
22 circuit, it was a safety on and off, but it was in the firing
23 side. It was to prevent the perpetrator, the builder, from
24 blowing himself up when he energized this system because he
25 knew this switch was off. By using the light bulb, and that's

1 reason the light bulb was also in the system, it tells him
2 whether he is safe to turn the switch on. The device will not
3 function unless this switch is turned to on.

4 The bomber, knowing a little bit about electricity,
5 understands one thing, that this relay has two contacts. Both
6 contacts cannot be energized at the same time. It's either
7 one contact or the other contact. He knows that if the
8 contacts are in the same location, this light bulb will be
9 burning, it will be lit up. And by that light bulb being lit
10 up, he knows he is safe to turn this switch on because there
11 wont be any power on this line. So, that's his indicator of
12 his own safety when he puts that switch in, turns that switch
13 to the firing mode.

14 Q With respect to this exhibit, captioned Improvised Double
15 Circuit Remote Control Initiation Detonation System, does that
16 fairly and accurately convey your opinion, in so far as the
17 presence of certain components and how they were wired?

18 A Yes, it does.

19 Q Beyond that, which we have on this circuit, the number
20 which I forget, do you have any understanding as to further
21 features, information, if will, associated with the 1986
22 device, for example, as to whether there was any duct tape
23 present?

24 A Yes. We know there was duct tape present in both, and
25 the information from the Massachusetts lab report, and, also,

1 the information that the detective took in his written report,
2 he discusses components being wrapped or layered in duct
3 tape.

4 Q How about soldering, sir?

5 A Soldering circuit is mentioned, also. The connections
6 were soldered. There was solder found on several of the
7 connections in the system, in addition to the batteries.

8 Q And AA batteries, I believe, you have --

9 A Yes, four AA batteries.

10 Q -- in the fusing circuit.

11 Okay, we also know that the 1986 device was affixed
12 to the undercarriage of the vehicle?

13 A That is correct.

14 Q By means of a round magnet?

15 A Yes, that is correct.

16 Q It was initiated by a remote control, correct?

17 A That is correct.

18 Q Now, with respect to -- I think you can resume the
19 stand.

20 THE COURT: What part of this 1986 device do you
21 regard as the "signature"?

22 THE WITNESS: The signature can be several things,
23 ma'am. But the soldering, twisting, soldering and taping of
24 connection is a very important point.

25 THE COURT: It is not the configuration of the

1 circuits?

2 THE WITNESS: It it can actually be a group of
3 things. A signature in a device is much like a handwritten
4 signature. You can sign your name twice, and it won't look
5 exactly the same, maybe used a different color of pen, but
6 there are certain key points that people typically always do
7 when they sign their name. And the same with the two
8 devices.

9 There are, there are individual consistencies that
10 are extremely important, like, twisting wires, soldering them,
11 and then taping them, points like wrapping components in duct
12 tape. In both devices, certain components were actually
13 entirely enclosed in duct tape. Using magnets, and not only
14 magnets, but circular magnets.

15 Using a toggle switch. Now, the toggle switch was a
16 safety switch in one and a firing switch in another, but they
17 were both in the firing circuit. They were both on the same
18 side of the circuit as far as one being a firing circuit and
19 the other being a fusing circuit.

20 Q Is it fair to say, Mr. Waskom, that looking at the 1991
21 device, as depicted here on Government's Exhibit 20, so far as
22 the componentry and wiring in the fusing circuit in the 1986,
23 did you consider that significant for signature purposes?

24 A Yes.

25 Q The same question with respect to the components and

1 layout and configuration, if you will, of the firing circuit
2 in the 1991 device, and the same for the componentry and
3 layout of the firing circuit in the 1986 device, do you
4 consider the layout of the device to be significant?

5 A I consider the layout of the device in relationship to
6 the entire device to be very important, yes.

7 Q Now, with respect to the main charge, they were
8 different?

9 A Yes.

10 Q Were they not?

11 A That is correct.

12 Q 1991, we had barium-based dynamite?

13 A Ammonia-based dynamite.

14 THE COURT: I need to go back. You are going fast
15 for me.

16 Review, again, the signature. One was the presence
17 of duct tape, right?

18 THE WITNESS: Yes, THE presence of duct tape, and
19 also the presence of duct tape being used to wrap components
20 or bundle components together.

21 THE COURT: The second was the soldering, the
22 particular manner of soldering?

23 A The fact that the connections were soldered soldered.
24 The third being toggle switch. The toggle switch was used in
25 both devices.

1 THE COURT: You have say, in particular, in the
2 firing circuit.

3 THE WITNESS: Yes, ma'am, in the firing circuit. The
4 fourth being they are both remote control systems. A remote
5 control device in itself is not a particular signature. But
6 when combined with the other information, supports signature
7 fact.

8 THE COURT: That was it?

9 THE WITNESS: The other part that go along with
10 signature quality, is actually the light bulb. The light bulb
11 was us used in the '86 and is in the detective's report as
12 being a test bulb in the system.

13 THE COURT: Where is it in the '91?

14 THE WITNESS: It was not built in or at least was not
15 recovered in the '91. But the information as to it being
16 purchased --

17 MS. GERTNER: I object.

18 A -- has been introduced.

19 THE COURT: The use of the light bulb is
20 questionable, but as a signature, since we don't have it, we
21 don't know whether it was in the '91.

22 Q Let me ask you to assume, for purposes of this hearing,
23 that a test lamp was purchased, along with other components,
24 on the 18th of October 1991, at the Mass. Ave. a Radio Shack
25 in Boston; assume that that test lamp was capable of testing

1 circuitry. Does that have significance to you?

2 A Yes, it does.

3 Q What significance is that?

4 A Well, just the purchase of the components, a test lamp; a
5 four-pack battery pack; a test lamp holder, a light bulb
6 holder; two small plastic boxes, which in hobby-people terms,
7 would be experimental boxes, it's what a person tries to build
8 something or works something out with. But everything that
9 was on the list of what was purchased, or specific items,
10 especially, could very easily be used to test the system. It
11 was used in one to test the system. It's my opinion that it
12 was used to test this system. I don't know that it was built
13 into the system, but in the workup in the building of it, it
14 is my belief that it was used.

15 Q With respect to the main charge, they are not the same?

16 A That is correct.

17 Q Dynamite, one; electriccally ignited flash simulator in
18 the '86, right?

19 A Yes. M 21 Hoffman in one, dynamite in the '91.

20 Q Do we need to see identity of main charge between the two
21 systems in order to arrive at a signature opinion, sir?

22 A No.

23 Q Why not?

24 A The dynamite or explosives in itself, it's fairly hard
25 for the common person to go out and get ahold of, especially,

1 the person that's wanting to use it for other than legal
2 purposes. If he wants it for legal purposes, he can purchase
3 it, giving information during that purchase that's required by
4 federal law.

5 But for a person using it in a device, especially, he
6 has to kind of get the explosive he has access to. Typically,
7 he had access to an M 21 from somewhere in '86. In '91, he
8 might not have been able to get M 21. Maybe he didn't want
9 M 21, or maybe he really didn't care if it was an M 21. He
10 wanted an explosive charge, and that's what he asked for. The
11 fact that they are not the exact same explosive, doesn't
12 really mean anything because it's hard to get explosive, and
13 it's extremely hard to get the same type type when you are
14 trying to do something illegal.

15 THE COURT: What is the relative strength of the
16 explosives, having in mind how the '91 device was
17 reconstructed and the amount of dynamite in that?

18 THE WITNESS: What you are asking, the amount of the
19 charge in each one?

20 THE COURT: Right.

21 THE WITNESS: How they would relate to each other?

22 THE COURT: Right.

23 THE WITNESS: The M 21 Hoffman has AN ounce and a
24 half of photo flash powder. Photo flash powder is considered
25 to be a high explosive by ATF. It is on the ATF's explosives

1 list. I don't know of any tests that have been done to give
2 the velocity of detonation. Most explosives are rated by
3 velocities of detonation. It is considered to be a high
4 explosive. In comparison of the two, it would not be as
5 strong as the dynamite, but it still has enough strength to be
6 considered in the high explosives bracket.

7 Q Is there enough information, other than the identity of
8 main charge in each device, Mr. Waskom, for you to give an
9 opinion as to the similarities between the two devices?

10 A Oh, yes.

11 MR. LIBBY: I think at this time, your Honor,
12 Mr. Waskom can resume the seat and finish up the examination.

13 (Pause.)

14 Q Now, Mr. Waskom, is it further part of your expertise, as
15 an explosives enforcement officer, to assess and to take into
16 consideration, features relating to circumstantial modus
17 operandi-type operation?

18 A Yes. When I examine devices or work on investigations,
19 it's natural to look for similarities between one device and
20 another device. And in certain cases, it's specifically asked
21 for. And at that point, we have tools we use to help us make
22 determinations as to operations.

23 Q Now, at this point, I would like you to make some
24 assumptions for me, please. I want you to assume the
25 following is common to each of the 1986 and 1991 explosives-

1 incidents: that each resulted in the design and construction
2 of a device, the product of a conspiracy between two or more
3 individuals.

4 A Okay.

5 Q It was made by one individual for application to a motor
6 vehicle, operated by a person with ties to another individual
7 in that conspiracy; and that the bomb designer, constructor,
8 builder, utilized an individual, other than himself or
9 herself, to purchase electrical components, including a test
10 lamp capable of testing circuitry. All right.

11 Now, making those assumptions, sir, do you consider
12 those assumptions to be significant?

13 MS. GERTNER: I object to the assumption. As
14 assumptions, I suppose they go in.

15 A Assuming, first, do you consider them to be significant
16 in assessing signature-type evidence beyond those
17 forensic-type points we discussed already?

18 A I consider them to be significant of their own weight,
19 and also to be significant to support other findings.

20 Q In other words, you do properly and frequently take into
21 accounting in the course of forming your opinion as to
22 signature-type ties between one explosive incident and
23 another?

24 A Yes, I do.

25 Q Now, with respect to this EXIS information we've gone

1 into here today, is it part of your expertise, also, as an EEO
2 to include reference to statistical results of data base
3 queries?

4 A Yes. Any information on statistics as far as explosives
5 or explosive devices are concerned, I go to the EXIS system.

6 Q I want you to make those assumptions with respect to
7 these EXIS data base results.

8 You heard Mr. Scheid's presentation?

9 A Yes.

10 Q With respect to all the bombings and attempted bombings,
11 14,252, and so forth, as referenced in Exhibit 8,
12 I believe --

13 THE CLERK: No. 7.

14 Q Have you seen that?

15 A Yes, I have.

16 Q And how we added a further feature down the line, we went
17 down to 2504 bombings, attempted bombings, cars, trucks, under
18 vehicles, remote control --

19 THE COURT: What's the question?

20 Q The question is, do you consider and then further taking
21 into account, the results of the further analysis with respect
22 to presence of duct tape, round magnets, and those other
23 materials laid out on the acetate board, did you have that in
24 mind?

25 A Yes.

1 Q Do you consider that type of information to be
2 significant in the course of forming your opinion with respect
3 to signature-type ties between one explosive incident and
4 another?

5 A Yes, I do. All of the information tied together and
6 supports my conclusion.

7 Q All right.

8 Now, Mr. Waskom, do you have an opinion, based upon
9 your training, education, and expertise as a career explosives
10 enforcement officer, both in the Army and with the ATF, based
11 upon your review, as you've indicated here at some length both
12 today and previously, with respect to the 1991 improvised
13 double circuit explosive device, 1986 improvised double
14 circuit explosive device, further based upon your review of
15 all of the presence on the scene in Roslindale, your review of
16 all the evidence, photographs, documents, interview reports,
17 lab reports, your consultation with forensic chemists on the
18 1991 device, all of the written information which you
19 indicated previously with respect to the 1986 incident,
20 including lab reports and detectives' notes, based upon the
21 assumptions I asked you to make with respect to the
22 circumstantial modus operandi-type information common to each,
23 and further based upon the EXIS data base results which can be
24 spread out here today, I ask you, do you have an opinion as to
25 whether the individual who designed and constructed the 1986

1 improvised explosive device also designed and constructed the
2 1991 improvised explosives device?

3 A Yes, in my opinion, taking into account components, the
4 information from the '86 device, and the components and
5 information from the '91 device, and the circumstances that
6 you mentioned had me take information from, it is my opinion
7 that the same person built both devices.

8 MR. LIBBY: I have nothing further, your Honor.

9 Thank you, Mr. Waskom.

10 Cross-examination by Ms. Gertner

11 Q Mr. Waskom, one of the things you have said that the two
12 devices, one of the bases for your conclusion that this was a
13 significant was duct tape; is that right?

14 A That is correct.

15 Q I believe you said that the components had been wrapped
16 in duct tape, that's how they had been bundled together; is
17 that right?

18 A That is correct. Some of the components, not all the
19 components.

20 Q In fact the 1986 device was entirely enclosed in duct
21 tape; isn't that right?

22 A That is from my information -- take at that back. That's
23 not totally correct. The receiver system, the relay, the
24 power source for the receiver system, was wrapped in duct
25 tape, had two wires coming out. The explosives charge was

1 connected at a later time.

2 Q I'm talking about in determining a signature, you want to
3 look at both inside of the bomb and the outside of the bomb,
4 right?

5 A You want to take everything into account, yes.

6 Q From your understanding, based on information that was
7 given to you, the inside of this bomb, some of the components
8 were wrapped together with duct tape, right?

9 A In the 1986 some of the components were wrapped in duct
10 tape, yes.

11 Q And the entire device was wrapped in sort of a glob of
12 duct tape; is that right?

13 A No, that is not correct.

14 Q Well did you have any information about the external
15 configuration of the '86 bomb?

16 A The detective's report, Detective Lanergan, talks about
17 the receiver system and the relay system and the power source
18 being wrapped in duct tape. It states that there were, if my
19 memory serves me correctly, there were two wires left hanging
20 out, which were at a later time hooked to the M 21 Hoffman
21 device, and a test on the system was performed, using a light
22 bulb. And I believe it even talks about a toggle switch being
23 out.

24 Q But how would you describe the external configuration of
25 the '86 device? How did it hang together?

1 A If you're asking me what held it together, from the
2 information I've got from the lab report, I don't really
3 know. It doesn't say what physically holds it altogether.

4 Q Okay.

5 A It does talk about duct tape being present, which could
6 be used to hold it together.

7 Q Duct tape could be used to wrap all the components
8 together, put a magnet on it, and stick it under a car?

9 A That could have happened.

10 Q You don't have information, all you know there was duct
11 tape that seemed to have wrapped some of the components; is
12 that right?

13 A I know there was duct tape that did wrap some of the
14 components.

15 Q Based on the information -- you don't know whether or not
16 duct tape wrapped the rest of the configuration?

17 A That is correct.

18 Q In the '91 device, though, in your testimony in this
19 Court earlier, you said that one of the things that was unique
20 about the '91 bomb was the nature of the enclosure because of
21 the box, you had trouble reconstructing because the fine
22 detail; isn't that right?

23 A That is correct.

24 Q Was there any evidence of plywood or fine woodworking in
25 the '86 device, so far as you know?

1 A Not to my knowledge.

2 Q And you testified that, also, that it appears that some
3 of the constituents were -- that the duct tape was used to
4 bundle the components, is that right? Bundle them was your
5 word.

6 A In?

7 Q '86.

8 A Yes.

9 Q In '91, the components were glued in, right?

10 A The components were glued, but the explosives were
11 bundled into one container-type system.

12 Q So, the only thing in '91 that was wrapped in duct tape
13 enclosed in a container, so far as you know, was the
14 explosive, right?

15 A That is correct.

16 Q Everything else was carefully superglued into the '91
17 device, right?

18 A That is correct.

19 Q And in fact, the '91 device also had separate
20 compartments for, I believe you said, there was a small box
21 and a large box, and in the small box was a slide switch?

22 A No, in the small box was the upper part of the Servo
23 motor with the horn and the toggle switch or actually the
24 firing switch toggle.

25 Q So the maker of the '91 bomb not only carefully did the

1 outside but made specific little compartments in a bomb?

2 A He made a compartment, yes.

3 Q There's no comparable evidence in '86, right?

4 A There is no information of any wood being used in the
5 '86, to my knowledge.

6 Q And there's no superglue in '86; isn't that right?

7 A That is correct.

8 Q And in fact, there was a large, a large amount of
9 superglue in '91, the way the box was constructed, the
10 components being glued in place, there's a large amount of
11 superglue in '91, right?

12 A There was, yes.

13 Q And you also said that the other thing was the twisting,
14 soldering, and taping of the wires in '86, that was one of the
15 things that you reconstructed from the Hankard report, right?

16 A I didn't reconstruct. I read and made an opinion.

17 Q Well, what exactly in the material that you read enabled
18 you -- strike that.

19 When you go to these bomb sites, one of the things
20 you want to do is look at the physical evidence, right?

21 A Of course.

22 Q Because it makes a difference, one element of the
23 signature is whether the bomber twists the wires to the right
24 or to the left, right?

25 A That could a fine point, yes.

1 Q And one of the things that you're saying here is that you
2 can reconstruct, based on three reports, that the '86 bomb was
3 twisted, soldered, and taped in a unique way?

4 A If I remember correctly, the '91 is the one we were
5 talking specifically twisted, soldered, and taped. The '86 we
6 know that the connections were soldered. We do not have -- I
7 do not have access to the physical evidence to take the solder
8 off to see if the wire was twisted underneath.

9 Q You don't know, then, whether the wires were twisted and
10 taped in '86. You only know that with respect to some '91
11 information?

12 A I know that there were connections that were taped in the
13 '86. I know that the connections in the '86 were soldered.
14 To say that each connection was twisted, I cannot say that.

15 Q All you're saying is they found tape in '86, they found
16 some soldering in '86, that's all you can say?

17 A No, I'm saying they are doing certain procedures, certain
18 techniques used by a person that are typically used by a
19 person in construction of a certain item.

20 Q Well, look at, directing your attention to the '91 bomb,
21 the '91 bomb, I think you told me during the trial, the bomber
22 simply took an intact Futaba receiver and changed the
23 batteries?

24 A Because an intact Futaba receiver, I can't say he changed
25 the batteries as far as the in tact Futaba receiver.

1 Q Okay. And then the connections between the receiver and
2 the rest of the fusing circuit, were with clips, isn't that
3 right? In other words, the connections between the receiver
4 and the rest would have to be with clips?

5 A No. The connection -- are we talking the '86?

6 Q No, talking '91.

7 A Talking '91, the Futaba system is totally wired at the
8 factory. Going from the power source, through the slide
9 switch, to the receiver, and coming out of the receiver, and
10 going to the Servo motor.

11 Q The Futaba receiver Servo motor is all wired in the
12 factory; is that what you are saying?

13 A They are wired in the factory. Each of two components,
14 the Servo motor at the end of the wire that provides power for
15 it, there's a push in connector. It's really not what you
16 would call a clip. I think of an alligator clip when I think
17 of a clip, a push-in connector. The same coming from the
18 slide switch, the on and off switch, it is a push-in connector
19 that goes into the receiver.

20 Q So, what the bomber did in '91, was, he took a
21 factory-constructed Futaba receiver, slide switch, Servo
22 motor, and snapped in connections at the end of it; is that
23 right?

24 A That is correct.

25 Q What the bomber did in '86, was take a Tyco receiver and

1 take it apart, right?

2 A What he did in '86 was took a toy car and take it apart.

3 Q And he had to reconstruct, he had to pull out the
4 receiver from the toy car, and then he gerryrigged the
5 connections. There was a considerable amount of solder, so
6 the report says, involved with the receiver, the power switch,
7 because he had to take it apart and reconstruct it, right?

8 A No, I don't think he had to reconstruct the receiver
9 system, the toy car system. That's all soldered at the
10 factory ready to run. You put batteries in and turn the
11 switch on. He did have to disassemble the car to some
12 extent. I don't know how much of the car was physically there
13 when he was finished.

14 The difference between the two is basically we're
15 talking about an explosives device, and the device is
16 something that progressively gets better. A person learns as
17 they go along.

18 Q Well, my question was not that -- thank you for that
19 answer -- that he basically, all that you had was portions of
20 a Tyco receiver; is that right? That's all that you had?

21 A Yes.

22 Q A description of portions of a radio signal receiver
23 Tyco, ROC, made in Korea?

24 A That's on the second page, yes.

25 Q Right. And that had been A receiver that had been once

1 in a toy car of some sort?

2 A Yes.

3 Q And the bomber here had to know enough to take the
4 receiver out of the toy car and reconfigure it for THE fuse
5 circuit?

6 A The bomber had to know enough to take it out of the car
7 and take two leads, two wires coming from it, that he knew had
8 power, because it ran either a small engine or a small coil,
9 and attach it to a relay.

10 Q And the attachments were by soldering, right?

11 A That is my understanding.

12 Q As opposed by factory clip, right?

13 A In the 1986 devices, there are no factory clips on the
14 Tyco system. They are soldered at the factory because they
15 are intended to stay inside the car.

16 Q He had to resolder because he had to reconfigure the '86
17 components of this remote control?

18 A The only thing he would have had to have reconfigured
19 soldering wise on the fusing system of the '86, would be the
20 relay connecting up.

21 Q Essentially, what he got out of the toy car was just a
22 circuit board, right, components attached to it?

23 A What he got out, out of the toy car was a four AA battery
24 pack, which is typically molded into the car, a slide switch,
25 which is typically the on and off switch for the power source,

1 between the power source and the receiver. He took out the
2 circuit board, which is built inside the car and connected by
3 conductor. And he took out the wires that continue on up to
4 the other controls of the toy car, that are actually what the
5 receiver system was for. Everything that was taken out would
6 have been soldered at the factory at that point, unless he
7 broke the connection taking it out.

8 Q And he had to, though, configure, then, at least attach
9 what he had taken out of the toy car in such a way as to keep
10 the receiver system intact so he wouldn't destroy it wouldn't
11 have to take it out, leave it in tacttact.

12 A There was no configuring to be done. If he takes out the
13 AA battery, the four-AA battery pack, the slide switch, and
14 the circuit board, data border for the receiver out of the
15 Tyco car, they were already hooked together by a conductor.
16 All they had to do is basically cut plastic out from around
17 them.

18 Q In other words, did find a Tyco exemplar?

19 A I found information on Tyco. The factory that handles
20 Tyco in the United States does not have, to their knowledge,
21 examples of the '86 cars. They have some information on the
22 '86 cars.

23 Q So you were really not able to have in hand, the Tyco toy
24 from which the '86 bomb was supposedly constructed, right? You
25 didn't physically have it, sir, right?

1 A The information I got --

2 Q My question, you didn't physically have it?

3 A I have one just like it.

4 Q How did you get one just like it?

5 A I went to Toys-R-Us.

6 Q You got from them a Tyco remote control that had been
7 made in '86?

8 A No. I looked at their Tyco. The company, which is in
9 Mt. Laurel, New Jersey, tells me that the construction of the
10 '86, compared to the construction of the '91, is virtually
11 the same. The size --

12 Q For signature purposes, is virtually the same good
13 enough?

14 A If we're talking signature purposes of the company that
15 builds a toy car, no, that really doesn't count in.

16 Q The issue here is how much work the bomber had to do to
17 take an intact Futaba receiver in one case and take a remote
18 control out of a toy car in the other, that's really the
19 issue, isn't it?

20 A Yes, but we have two issues to look at. The bomber
21 didn't really build, sit at his house, and construct this
22 receiver, he used one that was already built. He did
23 construct the firing side. The firing side was not built.

24 Q You don't know exactly how much, you don't have a
25 physical exemplar in front of you?

1 A That's correct.

2 Q Also, the slide switch that you have in your picture
3 here, was never found, right?

4 A To my knowledge.

5 Q There is no reference in the, in the '86 report to the
6 slide switch at all, right?

7 A I would have to look to be sure.

8 Q I show you the November 20th report, and see if you find
9 any reference to the slide switch.

10 Do you have it in front of you?

11 A Yes. I do not see a reference to the slide switch.

12 Q So you have extrapolated that there had to have been a
13 side switch, and it had to be here, right?

14 A I know that the Tyco car comes with a slide switch from
15 the factory.

16 Q You know that from your discussions with Tyco -- with the
17 person in Toys-R-Us in 1991?

18 A I know that from a discussion with a person at Tyco
19 Corporation in Mt. Laurel, New Jersey, and, also, from going
20 to Toys-R-Us and looking at all of the Tyco cars that they
21 had.

22 Q But no slide switch was found in '86, right?

23 A To my knowledge.

24 Q Okay.

25 And you have extrapolated, my question was, where on

1 the configuration the slide switch was supposed to be, right?

2 A Well, the slide switch fits into the position that I have
3 it on the board.

4 Q By your extrapolation, you're assuming that it is there,
5 you have to?

6 A I'm not assuming that it fits in there. I'm assuming
7 that it was part of the toy system. It was manufactured that
8 way. There would be logically no reason to cut one switch out
9 and put something else in or leave it out when it is already
10 there.

11 Q Now, with respect to the toggle switches, in fact, the
12 toggle switch in the '86 and '91 are different. One was a
13 double throw, and the other was a single throw.

14 A Yes.

15 Q And with respect to the light bulb, the light bulb, in
16 fact, a light bulb was found around the '86 device; isn't that
17 right?

18 A It is my understanding that in the report it discusses a
19 light bulb, yes.

20 Q And the only reason, you believe, that the light bulb was
21 used for the purposes of testing the circuit, is because of
22 the statements that were shown to you to you; is that right?

23 A That is correct.

24 Q One statement being that of Mr. Trenkler, that there was
25 a small bulb to test the circuit; is that right?

1 A Yes.

2 Q And you are assuming, then, that the light bulb was part
3 of the circuit in this fashion; is that correct?

4 A That is correct. I know that the bulb was used to test
5 the circuit. I do not know that the bulb was physically in
6 the circuit.

7 Q Testing the circuit, then, could have been before the
8 bomb was constructed, as opposed to actually on the bomb
9 itself.

10 A I think information in the report talks about the
11 components being bundled up with the duct tape, two wires
12 hanging out, the explosives being hooked up at a later time,
13 and at that time tested.

14 Q The report itself simply talks about -- in fact, the
15 report itself doesn't even mention the light bulb.

16 In any event, the toggle switch in '91 functioned --
17 in '86, functioned, in effect, as a safety; isn't that right?

18 A Repeat that, please.

19 Q The toggle switch in '86 functions as a safety?

20 A It functions as a safety switch in the firing circuit.

21 Q Right. There was no such function for the toggle switch
22 in the '91 bomb; isn't that right?

23 A In the '91 bomb, it was a firing switch in the firing
24 circuit.

25 Q And there was no safety on the firing circuit at all? --

1 A When, when you use a relay, a safety is needed. If
2 you're using a Futaba remote control system Servo motor, that
3 same safety is not necessarily needed.

4 Q But there was no, there was no safety in the firing
5 circuit, was my question?

6 A There was no safety in the firing circuit that I know of
7 in the '91 device.

8 Q And the only safety only on the '91 bomb was the slide
9 switch, so far as you know?

10 A The slide switch is not necessarily a safety. It could
11 be termed as a safety. It also to keep the batteries from
12 running down.

13 Q Okay. But the only way that the bomber, holding a '91
14 bomb, could make sure that it wouldn't go off while he was
15 holding it, is if he disconnected the slide switch, right?

16 A That would be his best safety at that point.

17 Q Now, with respect to the -- you said there was testimony
18 about --

19 Some of your testimony was gleaned from, apparently,
20 a Radio Shack receipt that was shown to you, a Radio Shack
21 receipt from October of '91; do you recall that?

22 A That is correct.

23 Q And in that Radio Shack receipt, there was a description
24 of a purchase of a Radio Shack battery pack, right?

25 A Yes.

1 Q There was no Radio Shack battery pack in the '91 bomb,
2 was there?

3 A That is correct.

4 Q And so, you are extrapolating that from -- and there was
5 no light bulb in the '91 bomb, right?

6 A To my knowledge, there was no light bulb in the '91.

7 Q So, you were extrapolating that the battery pack and the
8 light bulb be used in the same way in '91 as you believed them
9 to have been used in 1986; is that correct?

10 A That is correct. I believe they were used to test the
11 circuit during construction, probably at the final stages.

12 Q Now, in '86 there was one magnet, right?

13 A To my knowledge, in '86 there was one magnet, yes.

14 Q And in '91, there were how many magnets?

15 A If my memory served me correctly, there were 12 button
16 magnets approximate, and two of the large circular magnets.

17 Q And these components, the remote control system, the
18 magnets, switches, car, in fact, were all described in the
19 improvised explosive device book that I showed you, I believe
20 it is Exhibit 47 for identification?

21 A Yes, I'm aware of the one you're talking about. Those
22 components are described in the EOD book, although they are
23 not constructed in this manner.

24 Q But to the extent that your opinion about signature is
25 based on, I think I'm quoting you, toggle switch, remote -

1 control system, magnet, extent of the placement in a car, that
2 really any dummy reading the improvised explosives manual
3 would have, on page 49, would have come up with a
4 configuration, right?

5 MR. LIBBY: Objection, for the record.

6 THE COURT: The reference to "dummy."

7 MR. LIBBY: Not just that, half of what the witness
8 is talking about as to what forms the universe of what makes
9 up a signature.

10 THE COURT: Oh, I suppose the answer, then, is no.

11 MS. GERTNER: I'll rephrase the question.

12 Q With respect to the use of a remote control, a Servo arm,
13 a switch, a battery pack, antenna, and the suggestion that it
14 could be used under a car, all of that are in the improvised
15 explosives manual?

16 MR. LIBBY: Objection, your Honor.

17 THE COURT: What is the objection?

18 MR. LIBBY: Servo arm.

19 THE COURT: Is that not there?

20 MS. GERTNER: Servo arm is there.

21 MR. LIBBY: It is not in the '86.

22 MS. GERTNER: I'm talking about with respect to '91.

23 MR. LIBBY: Then I don't understand the question.

24 Q The configurations that were included in the '91, you
25 testified on direct examination, were all in the improvised

1 explosives manual?

2 A I think, I'm not sure that I understand what you're
3 asking me. If you're asking me if a person could look at the
4 diagram in the book that you have and possibly build a remote
5 control device, I guess they could.

6 Q When you take out the existence of a remote control
7 device and the existence of toggle switches, essentially, the
8 only thing that makes '86 and '91 similar, so far as you're
9 concerned -- actually, I can't even find what makes them
10 similar. Let rephrase the question.

11 When you take out the remote control because that
12 anyone can read up about. And if you take out using toggle
13 switches because anyone could read about that.

14 A I don't believe you'll find in, even in that manual --

15 Q I haven't finished my question. It is a convoluted
16 question, to be sure.

17 What is unique, you said, about those is the
18 twisting, soldering and taping the wires?

19 A Are you ready for me now?

20 Q Yes. Let me rephrase that.

21 A That plus the toggle switches and the taping of
22 components, the fact that they were even bundled in each
23 device, the fact that each device contained dual circuits, the
24 fact that each device contained dual battery systems, and I'm
25 not just talking about their remote control battery system and

1 the firing system, there are dual batteries in the firing
2 system.

3 Now, in the book you are looking at, it shows a
4 microswitch being used as the firing switch, which is the
5 typical way that remote control devices are built. The
6 microswitch is the most common switch found in remote control
7 bombs. Toggle switches are fairly unusual in remote control
8 bombs.

9 Q When you look at signature for the purpose of your work,
10 in addition to having the physical evidence, you frequently
11 have more than one, more than two bombs, don't you?

12 A Many times, yes.

13 Q In fact, most of your work is done on the basis of
14 several bombs; isn't that right?

15 A Probably for the question to come up, as far as, in other
16 words, do I look at every report and think, signature, no.
17 When attention is drawn to particular devices or particular
18 incidents or particular locations, then I might look. But if
19 I get a case, I don't automatically pull the EXIS records and
20 look for signature.

21 Q With respect to taping, the only thing taped in '91 was
22 the dynamite, right?

23 A No, connections were also taped.

24 Q The connections were through the snap connectors, right?

25 A The snap connectors were what snapped on to the 9-volt

1 batteries. The the 9-volt batteries snap connector has two
2 wires that come out, basically two ends. Those were attached
3 together by stripping the insulation off and twisting the wire
4 of one connector to the wire of the next connector. Those
5 were soldered and those were taped.

6 THE COURT: Which ones were those?

7 THE WITNESS: That's the 9-volt battery connectors,
8 it's listed a battery array on the '91 device.

9 THE COURT: Right.

10 THE WITNESS: Each of those little snap connectors
11 has two wires coming out.

12 THE COURT: Those wires were taped to the --

13 THE WITNESS: Those wires, the wire from one snap
14 connector was --

15 THE COURT: Taped to the next.

16 THE WITNESS: -- were soldered and taped to the wire
17 from the next connector, and so on down the line.

18 Q You only found one of them, right?

19 A We found, I believe two, one that was still intact from
20 the soldering, with the soldering.

21 Q And you're assuming from what you found that that there
22 would be five in a row; is that right?

23 A By what we found, we are saying there were five
24 connectors. We also found solder on the toggle switch.

25 Q With respect the connectors, you only found two of the

1 five, right?

2 A That's to my knowledge.

3 Q There's no way of knowing whether the two you found
4 belong to the bomb or are just contaminants in the ground,
5 there's nothing --

6 A No, from the damage that was done to the two that were
7 found, it can be chemically analyzed. That is more in
8 Ms. Wallace's territory than mine.

9 Q With respect to soldering, again, is it fair to say there
10 is considerable more solder in the '86 bomb than there was in
11 the '91 bomb?

12 A I would say there might have been a little more.

13 Q Because the person had to do some gerryrigging of the '86
14 components, right?

15 A He had to do some gerryrigging on the fire systems.

16 Q Under gerryrigging?

17 A Gerryrigging.

18 Q Yes sorry. Gerryrigging.

19 Q He had gerryrig the Tyco remote control?

20 A I don't think he had to gerryrig the Tyco remote control,
21 I think you can take a Tyco car and take it apart and have all
22 the components needed there, with the exception of adding on
23 the relay. There is a relay in the Tyco, but I don't know if
24 he used that particular one.

25 Q And you were able, by the way, with respect to the

1 soldering in the toggle switch, you were able to separate out
2 what solder was factory installed from what was installed by,
3 essentially, effected by an individual?

4 A On which?

5 Q On the '91 bomb.

6 A On the '91 device, we know that the 9 volt batteries are
7 not factory connected.

8 Q With respect to the toggle switch.

9 A The toggle switch?

10 Q You said there was were solder found on those two parts
11 of the battery array?

12 A Right.

13 Q I believe you testified that there was were solder found
14 on the toggle switch, right?

15 A I believe that's what I read from Ms. Cindy Wallace's
16 report.

17 Q You, of course, can't testify to what the -- whether or
18 not the soldering in the toggle switch was a factory solder or
19 the individual soldered it in addition?

20 A I know the factory does not put solder on the actual
21 connector places where the switch is to be wired into a
22 system.

23 Q But you didn't examine any of this yourself?

24 A I saw the components, yes.

25 Q But the analysis, the solder analysis, you say you did?

1 A I take the chemist's analysis, and then I also get access
2 to all of the evidence, and I go through the evidence myself.
3 If you're asking me if I can say that I know that there was
4 solder on that toggle switch connection, to my knowledge, if
5 my memory serves me correct, it is in Ms. Wallace's report. I
6 do not remember specifically looking at that piece, but if you
7 would like it looked at, I can look at it.

8 Q With respect to the -- at least with relationship the '86
9 bomb, you are saying there was, at least from the words that
10 the technician recorded, there is much more solder on the
11 9-inch long section with one end soldered to the central
12 terminal, a blob of solder on the free end of the wire,
13 another 9-inch long section with one end soldered to the
14 outside terminal, the free end of the wire soldered on the
15 surface.

16 There was considerably more in the '86 bomb?

17 A If you are asking me about more solder joints, I won't
18 say more connections in the '86. There were several
19 connections in the '86. They were also several connections in
20 the '91. One of the biggest reasons that we might not have
21 been able to locate as many solder joints in the '91 was the
22 fact of the amount of explosives used, much more explosive
23 used in the '91 compared to the '86 power-wise.

24 Q The fact of the matter is that for the most part, the
25 builder the '91 bomb had snap connectors and an intact

1 receiver, so that he didn't have to redo the connections in
2 the way the person who did '86 had to?

3 A He had to solder the joints, yes.

4 Q But the soldering was much less because he was doing much
5 less to the existing components?

6 A Yes. A signature is a technique used. It doesn't mean
7 that each device has to have the exact same number of solder
8 connections or use the exact use the same type of battery. It
9 is a technique used in building a device.

10 Q There's something unique about using solder to connect
11 the wires together?

12 A Yes, there is.

13 Q So that if you ran on the EXIS computer the numbers of
14 bombs with solder in it, you would not find, you would not
15 find a substantial number?

16 A You would, you would find a substantial number only if
17 you only asked it a partial question.

18 Q What are the ways of connecting wire together, sir?

19 A Just twisting them together. If they are just just
20 touching, there's a chance they'll be connected. You can use
21 alligator clips, many different methods.

22 Q Right. And the '91 bomb used connectors, the battery
23 connectors, right?

24 A The '91 bomb used the snap on 9-volt vote battery
25 connectors.

1 Q You testified -- I'm about to finish.

2 With respect to the '86 bomb, there was an M 21
3 Hoffman artillery flash simulator; is that right?

4 A That is correct.

5 Q In fact, when the bomb technician initially picked up the
6 debris, he misidentified it; is that right?

7 A Are you going by one of his reports?

8 Q Yes, in his first report, he called it a tank simulator?

9 A It is a tank simulator.

10 Q It talks about a simulator that had a pin in it like a
11 grenade?

12 A In his report, he talks either about a hand grenade
13 simulator or an artillery simulator, which are the initial
14 versions of the simulators used in the U.S. military. It is
15 not the version that was in this device.

16 Q Well, just one second, sir.

17 The person who actually found the bomb, reports that
18 it was a manual device with a pin that you have to pull out
19 like a grenade, right?

20 MR. LIBBY: Can we identify who that person was,
21 whether a Quincy Police officer --

22 MS. GERTNER: The Quincy police report.

23 MR. LIBBY: The Quincy Police patrolman.

24 Q The Quincy police patrolman identified that it was
25 something that had a pin in it like a grenade; is that right?

1 A If it's a Quincy Police patrolman, and not knowing what
2 background or knowledge he has in devices, at all, if he found
3 something that said simulator, he would most likely think of a
4 pull string stimulator. That's the most common one most
5 soldiers use.

6 Q With respect to the first report from the date of the
7 incident, it says Mr. Voit states that the explosion was an
8 artillery simulator often used by the National Guard. He
9 doesn't know what the ballistics of other articles were used
10 for, since the simulator has a pin like a grenade, no need for
11 wires or batteries. This is quoting Mr. Voit's words.

12 A If you're asking me -- if Mr. Voit was a bomb tech; is
13 that correct?

14 Q That's right?

15 A If you're asking me if the bomb tech understood what he
16 had, I would say from looking at the chemist report which
17 describes the components fairly well, that the bomb tech did
18 not know what he had.

19 Q And that's assuming that the chemist was looking at the
20 same thing that the bomb tech was looking at, obviously? In
21 other words, your conclusion about this would be making a
22 mistake depends upon him receiving what Mr. Voit picked up?

23 A If you're asking me if I can say if the evidence that was
24 picked up was that that the chemist looked at, I have no way
25 in myself of proving that I, I know systems are usually pretty

1 well established to where mistakes will not happen.

2 MR. LIBBY: Your Honor, just for the record if I
3 could, please, just so the Court understands the Government
4 objects hearsay on hearsay. We have a Quincy Police officer
5 reporting to restate with a Leo Voit, who has since deceased,
6 a crime lab technician has told him on the scene of the crime
7 as opposed to the formal report filed by Mr. Hankard after
8 microscopic examination --

9 THE COURT: She's trying to show that the formal
10 report is not trustworthy.

11 You can go on as long as you want but I will tell you
12 we're going to finish at five.

13 MS. GERTNER: One more question.

14 Q You said that the M 21 Hoffman artillery flash simulator
15 classified as an explosive device?

16 A It is classified, the flash powder --

17 THE COURT: Highly explosive?

18 A Yes. The flash powder in the M 21 by ATF is a high
19 explosive.

20 Q My question is, when you say "flash powder," isn't it the
21 M 21 simulator is used by the Army or whatever for simulating
22 battles; isn't that right?

23 A It is not for simulating battles. The M 21 is used for
24 simulate the actual firing of a main gun which is 120
25 millimeter gun on current tanks, during training. It

1 functions by explosion to make the noise and the smoke that is
2 produced when the main gun is fired.

3 Q It just make noise and smoke and it cause no injury
4 right?

5 MR. LIBBY: Objection.

6 A That is not correct.

7 Q When you say it uses photo flash powder?

8 A Yes.

9 Q The purpose of it is to make a big bang, right?

10 A Yes.

11 Q And in fact, in the reports on which your testimony is
12 based, there was no damage at all to the car, truck involved
13 here; is that right?

14 A That's incorrect. I believe the reports is the
15 handwritten note or a typed note where they are talking about
16 looking at the vehicle, while standing away from it.

17 Q It has no visible damage to the truck, right?

18 A No visible damage from, looking at it from what location,
19 I don't know.

20 Q Where also the dynamite in the 1991 device, was a
21 substantial and powerful explosives right?

22 A There is a difference there, yes.

23 MS. GERTNER: I have no further questions.

24

25

1 Redirect Examination by Mr. Libby

2 Q Very quickly, Mr. Waskom, you're familiar with an M 21
3 Hoffman?

4 A Yes, I am.

5 Q You've detonated them before?

6 A Yes, I have.

7 Q Assuming that an individual is either holding the M 21 at
8 the point of initiation or is within a foot or two, do you
9 have an opinion as to the kind of personal injury that might
10 cause?

11 A If he's holding it in his hand, he won't have a hand. If
12 it's within a foot, he will receive serious burn on the bear
13 skin, that's exposed from the flash given out, possibly have
14 severe hearing problems after that, and could catch some of
15 the fragmentation, the plastic and wiring pieces being blown
16 away from the device.

17 Q All right. Now, back with respect to this Quincy PD
18 report by the officer on the scene on the occasion September
19 1, 1986, at that time, sir, there were, there was more than
20 one kind of an artillery flash simulator; is that right?

21 A Yes, there were three different types in that size
22 range.

23 Q We're talking about this electrically initiated one
24 that's been marked Government's Exhibit 41 here, correct?

25 A That is correct.

1 Q The one with the ribs and the plastic cap with the two
2 prongs.

3 A Yes.

4 Q Was that, is there another kind that's more common in
5 that that was in circulation in the military for training
6 about that time?

7 A There are two others that are more common, the hand
8 grenade simulator and artillery simulator that are still
9 current in use.

10 Q Are those the kinds that appear to be described here in
11 the Quincy PD report with the pin like a grenade?

12 A When he talks about a pull spring or pin like a grenade
13 he's talk about the other two pull friction type simulators,
14 yes.

15 Q Where you pull it as opposed to providing electrical
16 impulse; is that correct?

17 A That's correct.

18 Q It is more common to see the pull kind?

19 A It's more common to see the pull kind, but they are
20 totally different in construction as far as the construction
21 materials.

22 Q Now, with respect to counsel's question about soldering,
23 amount of soldering, and so forth. For purposes of
24 determining signature type similarity, between two explosive
25 devices, is it more important to focus on the amount of

1 soldering used in each device or is the fact that the
2 technique incorporated soldering more important for your
3 analysis?

4 A The fact that the technique incorporated soldering is
5 much more important than how the soldering was done.

6 Q Why is that?

7 A Mainly because the contacts that you are actually
8 soldering, can have a lot to do with what your connection
9 looks like. The fact that a person solders at all, is a
10 certain technique that he uses when he builds something. If
11 he is working on electrical components, he's going to solder.
12 If a person doesn't have a background in, in doing electrical
13 wiring, more than likely they are just going to twist their
14 connections.

15 Q Let me show you very quickly, Exhibits 17 C, a photograph
16 of soldered wire, and 17 B, and ask you first with respect 17
17 C, that wire there again for the Court, what is that please?

18 A This is a red and a black wire, that shows signs this
19 tape being over it before it got moved away. You can see the
20 adhesive that is still on the wire. You can see the solder
21 where the two wires are soldered together. And this, these
22 two particular wires come off the 9 volt battery snap
23 connector.

24 Q The snap connector already comes from the factory in such
25 a way you can actually snap it on and it will work, correct?

1 A You can snap it on and have two wires sticking out to be
2 hooked to something.

3 Q But here, is it your testimony, that the maker twisted,
4 soldered and then taped those connections?

5 A It's on this particular one from the from the view I have
6 here. I know it's soldered. I know they are soldered
7 together, to say it is twisted, under what I can see right
8 here I couldn't actually say.

9 Q Is that consistent with a sort of a mindset of the maker,
10 if you will, to provide some kind of a measure of fall back
11 security to insure that that connection is going to hold?

12 MS. GERTNER: Objection, your Honor.

13 THE COURT: I don't see how he can tell us about
14 mindset, you know.

15 MR. LIBBY: I'll rephrase the question.

16 Q Is that type of technique, Mr. Waskom, in your
17 experience, does that indicate any kind of a particular
18 technique with respect insuring detonation or operation,
19 successful operation of the device?

20 MS. GERTNER: Objection, your Honor.

21 THE COURT: I think he can tell us that.

22 Q Is it?

23 A In my opinion soldering, yes, it is an extra safety
24 factor, he's put into his construction to make sure it work
25 correctly.

1 Q Do we that feature elsewhere in the '91 device? It had a
2 kind of added soldering?

3 A Okay. The solder in this is the picture of the terminal
4 off the bottom of the toggle switch. And it does show solder
5 on the bottom of the terminal with one strand of wire coming
6 out from under the solder, yes.

7 Q Now, Mr. Waskom, that wire could have simply been laid
8 through that contact point and twisted, correct?

9 A Yes, it could have been.

10 Q Mr. Waskom.

11 THE COURT: Mr. Hansen will have very little time to
12 testify the way in which you are going. We will stop at five
13 today.

14 MR. LIBBY: I understand, your Honor. Ms. Gertner
15 went about ten minutes past.

16 THE COURT: To some extent you are guilding the lily
17 at this point and I'm not too sure I need it.

18 Q Mr. Waskom, with respect to the two distinctions pointed
19 out by counsel, between the '86 and the '91 with respect to
20 the container, we had glue in a box present in 1991, whereas
21 we didn't have that in 1986.

22 THE COURT: I don't know what we had in '86.

23 A That's correct.

24 Q Can that be explained only as difference for signature
25 type purposes, sir, or can it also reflect some kind of -

1 improvement in the maker's technique?

2 MS. GERTNER: I'm going to object, your Honor.

3 THE COURT: How can he tell us that?

4 Q Can you --

5 THE COURT: We're nothing longer talking
6 generalities.

7 Q Can it only be explained, can the presence in 1991, or
8 rather -- strike that. Can the presence in a later device, of
9 a finely construct box, glues, nails, so forth, only be looked
10 upon as different as indicating a difference in signature
11 purposes, in other words, if you see that present in a later
12 device, does it automatically exclude that that maker could
13 not have made the previous device?

14 MS. GERTNER: Objection, your Honor.

15 THE COURT: He can answer it.

16 Q Does it automatically exclude that, sir?

17 A No, it doesn't exclude it. The fact that the first one
18 was taped and the second one was in a box, shows an
19 improvement. But the other striking points, I guess, I should
20 say about the device itself, is where the signature quality
21 comes from.

22 Q Finally, with respect to the Tyco toy car did you need to
23 have one in front of you, did you need to have that one in
24 front of you, Mr. Waskom, in order to give your opinion here
25 today with respect to the nature of the circuit board and --

1 relay?

2 A No, I did not.

3 Q All right.

4 MR. LIBBY: Thank you, nothing further.

5 MS. GERTNER: Mr. Donald Hansen.

6 First, we'll take a five minute recess.

7 THE COURT: For the record, Mr. Shay is absent and
8 his counsel has agreed that we may proceed without him while
9 we determine whether he's absent voluntarily or otherwise.
10 The parties have agreed that Mr. Hansen is qualified to
11 testify on what?

12 MS. GERTNER: On the issue of whether the factors
13 listed by the Government in its motion to admit the '86
14 bombing are indicators of similarity in the --

15 THE COURT: The identity question.

16 MS. GERTNER: The identity question.

17 MR. LIBBY: For the purposes of this hearing, your
18 Honor.

19 MS. GERTNER: Yes, yes.

20 Donald L. Hansen, sworn

21 Direct Examination by Ms. Gertner

22 Q Mr. Hansen, directing your attention, in your
23 experience --

24 THE COURT: Let's have Mr. Hansen's full name,
25 please.