

WDD BOW
COPY

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

STENOGRAPHIC TRANSCRIPT

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:
FRIENDS FOR ALL CHILDREN, INC., as
:
legal guardian and next friend of the
:
named 150 infant individuals, et al.
:
Plaintiffs,
:
-vs-
:
LOCKHEED AIRCRAFT CORPORATION,
:
Defendant and
:
Third Party Plaintiff,
:
-vs-
:
THE UNITED STATES OF AMERICA,
:
Third Party Defendant,
:
----- X

Arlington, Virginia

Thursday, September 24, 1981

DEPOSITION OF JOHN W. EDWARDS

Mattingly Reporting, Inc.

COURT REPORTERS

4339 Farm House Lane

Fairfax, Va. 22032

COPY

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

----- x
FRIENDS FOR ALL CHILDREN, INC.,
as legal guardian and next friend
of the named 150 infant individuals,
et al,

Plaintiffs,

-vs-

Civil Action No.
76-0544

LOCKHEED AIRCRAFT CORPORATION,

Defendant and
Third-Party Plaintiff,

-vs-

THE UNITED STATES OF AMERICA,

Third-Party Defendant.

----- x
CARLY MICHELLE KURTH, et cetera,

Plaintiff,

-vs-

Old Civil Action No.
76-0544-44

LOCKHEED AIRCRAFT CORPORATION,

Defendant and
Third-Party Plaintiff,

New Civil Action No.
80-3223

-vs-

THE UNITED STATES OF AMERICA,

Third-Party Defendant.

----- X

LORIE CARNIE, et cetera,
Plaintiff,

-vs-

LOCKHEED AIRCRAFT CORPORATION,
Defendant and
Third-Party Plaintiff,

Old Civil Action No.
76-0544-41

New Civil Action No.
80-3222

-vs-

THE UNITED STATES OF AMERICA,
Third-Party Defendant.

----- X

JOSEPH FRANCIS CHIONE, et cetera,
Plaintiff,

-vs-

LOCKHEED AIRCRAFT CORPORATION,
Defendant and
Third-Party Plaintiff,

Civil Action No.
76-0544-13

-vs-

THE UNITED STATES OF AMERICA,
Third-Party Defendant.

----- X

1
2
3 LY DEBOLT, et cetera,

4 Plaintiff,

5 -vs-

6 LOCKHEED AIRCRAFT CORPORATION,

7 Defendant and
8 Third-Party Plaintiff,

9 -vs-

10 THE UNITED STATES OF AMERICA,

11 Third-Party Defendant.

12
13 THUY DEBOLT, et cetera,

14 Plaintiff,

15 -vs-

16 LOCKHEED AIRCRAFT CORPORATION,

17 Defendant and
18 Third-Party Plaintiff,

19 -vs-

20 THE UNITED STATES OF AMERICA,

21 Third-Party Defendant.

Civil Action No.
76-0544-80

Civil Action No.
76-0544-79

1
2
3 MELINDA SUE KELPE, et cetera,

4 Plaintiff,

5 -vs-

6 LOCKHEED AIRCRAFT CORPORATION,

7 Defendant and
8 Third-Party Plaintiff,

9 -vs-

10 THE UNITED STATES OF AMERICA,

11 Third-Party Defendant.
12

13 JEFFREY TIM LINDBERG, et cetera,

14 Plaintiff,

15 -vs-

16 LOCKHEED AIRCRAFT CORPORATION,

17 Defendant and
18 Third-Party Plaintiff,

19 -vs-

20 THE UNITED STATES OF AMERICA,

21 Third-Party Defendant.
----- x

Civil Action No.
76-0544-70

Civil Action No.
76-0544-74

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LUKE MEAD, et cetera, :
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Plaintiff, :
:
-vs- :
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LOCKHEED AIRCRAFT CORPORATION, :
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Defendant and :
Third-Party Plaintiff, :
:
-vs- :
:
THE UNITED STATES OF AMERICA, :
:
Third-Party Defendant. :
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----- X
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RACHEL MEAD, et cetera, :
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Plaintiff, :
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-vs- :
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LOCKHEED AIRCRAFT CORPORATION, :
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Defendant and :
Third-Party Plaintiff, :
:
-vs- :
:
THE UNITED STATES OF AMERICA, :
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Third-Party Defendant. :
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----- X

Civil Action No.
76-0544-60

Civil Action No.
76-0544-59

1
2
3 BENJAMIN LUOM MURRY, et cetera,

4 Plaintiff,

5 -vs-

Civil Action No.
76-0544-71

6 LOCKHEED AIRCRAFT CORPORATION,

7 Defendant and
8 Third-Party Plaintiff,

9 -vs-

10 THE UNITED STATES OF AMERICA,

11 Third-Party Defendant.

12
13 ROGER WILHELM NUSBAUM, et cetera,

14 Plaintiff,

15 -vs-

Civil Action No.
76-0544-69

16 LOCKHEED AIRCRAFT CORPORATION,

17 Defendant and
18 Third-Party Plaintiff,

19 -vs-

20 THE UNITED STATES OF AMERICA,

21 Third-Party Defendant.

1
2
3 MARK TAN ROTHHAAR, et cetera,

4 Plaintiff,

5 -vs-

6 LOCKHEED AIRCRAFT CORPORATION,

7 Defendant and

8 Third-Party Plaintiff,

9 -vs-

10 THE UNITED STATES OF AMERICA,

11 Third-Party Defendant.
12

13 TAI LARS STADHEIM, et cetera,

14 Plaintiff,

15 -vs-

16 LOCKHEED AIRCRAFT CORPORATION,

17 Defendant and

18 Third-Party Plaintiff,

19 -vs-

20 THE UNITED STATES OF AMERICA,

21 Third-Party Defendant.
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Civil Action No.
76-0544-63

Civil Action No.
76-0544-33

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STEPHANIE WILKS, et cetera, :
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Plaintiff, :
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-vs- : Civil Action No.
: 76-0544-52
LOCKHEED AIRCRAFT CORPORATION, :
:
Defendant and :
Third-Party Plaintiff, :
:
-vs- :
:
THE UNITED STATES OF AMERICA, :
:
Third-Party Defendant. :
:
----- x

Arlington, Virginia

Thursday, September 24, 1981

Deposition of JOHN W. EDWARDS, called for
examination by counsel for the plaintiff in the above-
entitled matter, pursuant to notice, the witness being duly
sworn by JEROME T. MATTINGLY, a Notary Public in and for
the Commonwealth of Virginia at Large, at the offices of
Lewis, Wilson, Lewis & Jones, Ltd., 2054 North 14th Street,
Arlington, Virginia, commencing at 10:25 o'clock a.m., the
proceedings being taken down by JEROME T. MATTINGLY and
DEBORAH S. CUBBAGE by stenotype, and transcribed under
their direction.

C O N T E N T S

<u>Witness</u>	<u>Examination by counsel</u>	
	<u>Mr. Lewis</u>	<u>Mr. Dubuc</u>
John W. Edwards	10	194

E X H I B I T S

<u>Defendant's</u>	<u>Identification</u>
W-1 (Legal size yellow pad with drawing)	26

1 **APPEARANCES:**

2 **On behalf of the Plaintiffs:**

3 **OREN R. LEWIS, JR., ESQUIRE**
4 **MICHAEL J. McMANUS, ESQUIRE**
5 **Lewis, Wilson, Lewis & Jones, Ltd.**
6 **2054 North Fourteenth Street**
7 **P. O. Box 827**
8 **Arlington, Virginia 22216**

9 **On behalf of the Defendant/Third-Party Plaintiff:**

10 **CARROLL E. DUBUC, ESQUIRE**
 JOHN J. CONNORS, ESQUIRE
 Haight, Gardner, Poor & Havens
 1819 H Street, Northwest
 Washington, D. C. 20006

NOTE

Upon reading the following deposition and before subscribing thereto, the deponent, John W Edwards, deposed on 24 Sept 1981, indicated the following corrections:

Page Line Reads: July
11 ~~5~~ 7 ^{14th}
Should Read: September

Page Line Reads: approximate
21 7
Should Read: proximate

Page Line Reads: employee
30 19
Should Read: agency

Page Line Reads: certainly
48 18
Should Read: completely

Page Line Reads: TORC
55 8
Should Read: TORQUE

John W Edwards
DEPONENT

NOTE

Upon reading the following deposition and before subscribing thereto, the deponent, John W Edwards deposed on 24 Sept 1981, indicated the following corrections:

Page Line Reads: Compensation
58 22

Should Read: Composition

Page Line Reads: roof
80 13

Should Read: root

Page Line Reads: Scans
80 23

Should Read: skins

Page Line Reads: washingtonian
82 10

Should Read: University

Page Line Reads: Doeme Perry
85 6

Should Read: GAUME Berry

John W Edwards
DEPONENT

NOTE

Upon reading the following deposition and before subscribing thereto, the deponent, John W. Edwards, deposed on 24 Sept 1981, indicated the following corrections:

Page Line Reads: STAPP
90 9 & 12

Should Read: STAPP

Page Line Reads: was related
100 6

Should Read: wasn't related

Page Line Reads: gross rate
102 8

Should Read: gross weight

Page Line Reads: air
128 22

129 2
129 7
129 14
129 15, 17, 20
Should Read: error

Page Line Reads: air
130 19

Should Read: error

John W. Edwards
DEPONENT

NOTE

Upon reading the following deposition and before subscribing thereto, the deponent, John W Edwards, deposed on 24 Sept 1981, indicated the following corrections:

Page Line

131 5
133 12
133 14
133 19

Reads:

air

Should Read:

error

Page Line

137 6

Reads:

check

Should Read:

eliminate the word "check"

Page Line

137 7 & 8

Reads:

normal to record

Should Read:

normally required

Page Line

141 7

Reads:

--- article, I heard ---

Should Read:

--- article, if I heard ---

Page Line

146 18

Reads:

11/16th

Should Read:

11 to 16

John W Edwards

DEPONENT

NOTE

Upon reading the following deposition and before subscribing thereto, the deponent, John W Edwards, deposed on 24 Sept 1981, indicated the following corrections:

Page Line Reads:

148

Should Read:

Page Line

148 14

Reads:

mechanical

Should Read:

elements word mechanics

Page Line

171 1

Reads:

feet

Should Read:

seat

Page Line

183 23

Reads:

C P R

Should Read:

C B R

Page Line

Reads:

Should Read:

John W Edwards

DEPONENT

P R O C E E D I N G S

Whereupon,

JOHN W. EDWARDS

was called as a witness by counsel for the plaintiffs, and having been first duly sworn by the Notary Public, was examined and testified as follows:

EXAMINATION BY COUNSEL FOR PLAINTIFF

BY MR. LEWIS:

Q Would you state your full name, please?

A John W. Edwards.

Q And you're an employee of Lockheed Aircraft Corporation?

A That is correct.

Q And you testified before, both in Court and by deposition, is that correct, Mr. Edwards?

A That is right.

Q Now I have Defendant's Exhibit D-1298 which is a report by you and you are described as the Supervisor, LAC Technical Team Serving Aircraft Accident Report?

A That is correct.

Q When did you write this, it doesn't have a date?

A Fairly recently, within the last month.

Q Well, can you -- when you say within the last

1 month.

2 Q Well, can you -- when you say within the last
3 month, was it completed in July?

4 A I say within the last month.

5 Q September or August?

6 A I would say it's either the last week of August
7 or the first three weeks of July, somewhere in there, I
8 don't recall exactly.

9 Q Did you give it to Mr. Dubuc when you finished
10 it?

11 A I mailed it to Mr. Dubuc.

12 Q And did you mail it to Mr. Dubuc when you
13 finished it?

14 A Yes, I did.

15 Q So your letter to Mr. Dubuc would have the date
16 that you mailed that, wouldn't it?

17 A I am not sure. I don't believe I had a letter
18 that transmitted it. I think I just put it in a --

19 MR. DUBUC: There is no letter of transmittal.

20 THE WITNESS: I don't recall it.

21 MR. DUBUC: You want the date?

22 MR. LEWIS: Just approximately.

23 BY MR. LEWIS:

1 Q Can you give us your best estimate, Mr. Connors?

2 MR. DUBUC: We can check that for you. I
3 estimate within the last three weeks.

4 THE WITNESS: Three weeks ago, probably the end
5 of August.

6 MR. LEWIS: Sometime in that area?

7 MR. DUBUC: It's within two or three days of
8 our transmittal letter to you, which I think is probably --
9 do we have that?

10 MR. CONNORS: No.

11 MR. DUBUC: You have that. As far as we are
12 concerned, it was given to you within two or three days of
13 our receipt. That is as close as I can get.

14 BY MR. LEWIS:

15 Q Were you -- you were in attendance at a meeting
16 that took place in a club in Washington, D. C. in August?

17 A I attended a meeting in a club in Washington,
18 D. C. and I don't remember the exact date.

19 Q I didn't ask you the exact date. Was it in
20 August?

21 A I don't remember whether it was August or
22 September.

23 Q Was there more than one meeting?

1 A There was only one meeting that I attended.

2 Q Where did it take place?

3 A At the University Club.

4 Q Was that exhibit, D-1293 in existence at that
5 time?

6 A I think that document was finally put together
7 sometime after that meeting.

8 Q So you say it was not in existence at that time?

9 A It was not typed, et cetera, until after that
10 meeting, as I recall.

11 Q Have you given or do you know when anybody else
12 gave copies of this report to anyone else other than the
13 lawyers? In other words, was it sent to any other expert?

14 A I have no knowledge of that. I sent it to
15 Mr. Dubuc.

16 Q So you don't know whether anyone else got a copy
17 or not?

18 A No, I don't.

19 MR. LEWIS: All right. Do you know, Mr. Dubuc?
20 I am just trying to establish the date, there may be a
21 transmittal with another date on it.

22 MR. DUBUC: I think we have got the date, within
23 two or three days.

1 MR. LEWIS: If you have a transmittal letter,
2 it wasn't sent to other experts?

3 MR. DUBUC: It was sent to some, yes.

4 MR. LEWIS: You know, I can find out from them
5 when it was. If it would be convenient, if you will try to
6 ascertain when that was.

7 MR. DUBUC: We will do that.

8 BY MR. LEWIS:

9 Q Now you were serving as a Lockheed representa-
10 tive in some capacity with the Aircraft Accident Report, is
11 that correct?

12 A Yes, I was a member of the technical team serv-
13 ing the Accident Board and of the four Lockheed people there,
14 which I was one, I was the ranking member and I was -- I
15 guess you would call the supervisor of at least those other
16 three people.

17 Q That is Mr. Carrant, Mr. Dobson, and Mr.
18 Lovelace?

19 A That is correct.

20 Q Now you went to Saigon, is that right?

21 A That is correct.

22 Q And how many of these people went to Saigon?

23 A All three of those people went to Saigon.

1 Q And the four of you then?

2 A Four total, four Lockheed people.

3 Q And you spent part of your time at the Clark
4 Air Force Base and part of the time in Saigon going back
5 and forth?

6 A We were based at Clark Air Force Base and
7 commuted to and from Saigon for the most part.

8 Q And about how many trips did you make to
9 Saigon?

10 A I would say that I personally made four to
11 six trips, and here again, I don't recall exactly.

12 Q Now while you were in Saigon, you saw some
13 helicopters making aerial motion pictures of the scene, is
14 that correct?

15 A There were helicopters in the area most of the
16 time. As to the motion pictures, I guess I have no exact
17 knowledge of that, although I will say that I did see
18 helicopters flying over with cameras and you may assume
19 they were taking pictures. I really don't know.

20 Q The cameras are motion picture cameras, aren't
21 they?

22 A I guess I really didn't pay that much attention.
23 They were going over, you have to be conscious of helicopters

1 passing over.

2 Q You did see some motion picture cameras there,
3 didn't you?

4 A I didn't see it.

5 Q Anywhere on the ground?

6 A On the ground, I never saw one on the ground.

7 Q A camera?

8 A A camera, no.

9 Q Did you see any motion picture cameras in the
10 care of any of the Air Force personnel that were going to
11 or from Saigon?

12 A I don't believe any of the Air Force people
13 that traveled with me had motion picture cameras. I don't
14 believe that, I don't recall it.

15 Q Now you had access to the room at Clark Air
16 Force Base where the book of still photographs were located,
17 were you not?

18 A I had access to that room during all times
19 except when the Accident Board was meeting.

20 Q I understand that. You and the other Lockheed
21 representatives had an opportunity to order still photo-
22 graphs from that book, did you not?

23 A Order still photographs?

1 Q Well, to obtain copies of enlargements from
2 that book.

3 A I only recall one case where we would look at
4 a picture and said I would like to get that enlarged to see
5 more detail. I only recall one case. If there were others,
6 it doesn't come to mind.

7 Q I understand that. I understand in the room
8 that you have described there was a book which was a heavy,
9 looseleaf binder with contact, .35 mm and other contact
10 prints in it and they were numbered. You remember that
11 book?

12 A I honestly don't recall a book of photographs
13 put together systematically, per se. I do recall having
14 seen photographs on the table, photographs that were
15 reproduced and were there for people to observe and study.

16 Q How would the photographic team operate, they
17 would go out and take some pictures, come back, develop
18 them, enlarge them, and they would be available for your
19 and other people's inspection the next day, is that right?

20 A The next day or shortly thereafter. A slight
21 amendment to your statement, they would print small-size
22 pictures.

23 Q Right.

1 A And they would be on the table in a loose form.

2 Q I understand.

3 A Now, they wouldn't normally make enlargements
4 and again I only recall the one case that I ever suggested
5 an enlargement.

6 Q I understand. And these would be contact prints
7 of mostly .35mm size? The loose pages that you're speaking
8 of.

9 A The loose pages, they would be whatever film
10 was used, in some cases .35, in some cases it was different
11 size cameras, 120 or something like that.

12 Q Now does each of those prints, they were numbered,
13 weren't they?

14 A I don't really recall the numbers at that time.
15 I am sure that the photographer was a systematic man and
16 would maintain some sort of a number on the negatives, et
17 cetera. I don't recall looking over and saying here is
18 some number so and so, I really don't recall that.

19 Q You're not saying it wasn't there, you're just
20 saying you don't recall?

21 A You're correct.

22 Q Some kind of numbering system would be required
23 for people to order individual copies to ask for enlargements

1 of particular copies?

2 A It may be, maybe say hey, enlarge that photo-
3 graph without even -- no, I don't recall the numbering.

4 Q I understand that. Well, were the things that
5 you saw there -- they were film strips that were contact
6 prints, were they not?

7 A No, sir. As I recall, there were individual
8 photos which had been cut.

9 Q About how big, three-by-five, five-by-ten?

10 A Oh, no, they were two-and-a-half by three-and-a-
11 half, whatever a normal photo that you ordered out of the
12 Fotomat. I don't know whether you call that a contact
13 print or not.

14 Q Can you give me some idea on this piece of
15 paper the size? Just draw it to the best of your capacity.

16 A This is going back a long ways.

17 Q I understand.

18 A As I would recall, the photo would be about
19 like what you would get when you take your film into Fotomat.
20 So you're talking about something, it may be larger, it may
21 be smaller.

22 Q Write approximate photo size under that picture
23 or drawing.

1 So what you're telling me then, Mr. Edwards,
2 is that the photographer would go shoot whatever film he
3 shot, come back, develop them, and photographs or prints
4 of the approximate size of the one you have described here
5 would be available for you and the members of your technical
6 team and the Board to review so that they could understand
7 what happened in the accident?

8 A That is correct, and the photo may have been
9 slightly larger than that.

10 Q I understand that. And this was a process that
11 occurred on a relatively regular basis over the time that
12 you were there as long as the photographers were taking
13 pictures?

14 A That is correct, yes.

15 Q Now how long were you there?

16 A How long was I?

17 Q At Clark Air Force Base, sir, in this role of
18 Technical Advisor to the Board, sir?

19 A I think our total time at Clark was a period
20 of about three weeks.

21 Now, in between that, of course, we commuted
22 to Saigon and back several times.

23 Q As far as your role is concerned, you did not

1 -- you say participate in the actual Board meetings, is
2 that correct?

3 A Not the actual real-world Accident Board, that
4 is correct. I did not participate.

5 Q And what part did you participate in?

6 A My role as Technical Advisor, my role is to
7 strictly, to determine the most approximate cause of the
8 accident and we dealt mostly with aircraft parts, et cetera.

9 Q And then were there any -- I don't know whether
10 this is a word that is correct, but formal meetings of the
11 Board with the Technical Advisors so they could get input
12 from you? I am trying to find out how you functioned, sir.

13 A There were lots of informal meetings. Now I
14 would draw the line and say it was an informal Board meeting
15 which I participated in. We're always around the table
16 talking about what if type situations.

17 Q That is fine. I am not suggesting that it was
18 a Rama Board session or anything of that kind at all. I am
19 trying to find out how you served the Board and I am sure
20 you answered their questions and so forth in some way.

21 A Oh, yes.

22 Q Either before a formal Board meeting or after
23 a Board meeting. You would be there with the Board members,

1 is that correct?

2 A We would be there with people who were members
3 of the Board and we would all talk about various things,
4 et cetera.

5 Q And your particular role was because you came
6 from the manufacturer of the airplane, this was to enable
7 them to understand whatever they needed to know technically
8 about the airplane and the parts, right?

9 A That is correct.

10 Q I may be misstating it, you say it in your own
11 words.

12 A I want to clarify one thing. There were several
13 Technical Advisors, not just us Lockheed people. Air Force
14 people and civilian service people and several others who
15 were Technical Advisors also who were not members of the
16 Board. It was not just Lockheed people that were excluded
17 from being official members of the Board.

18 Q I understand that. I am not suggesting that.
19 I understand that the Board meeting is supposed to be private,
20 when they meet.

21 A It's not just the Lockheed people that they
22 exclude, they exclude several.

23 Q I understand that. There were many official

1 members of the Board that attended official meetings, but
2 I am just trying to find, you know, how you functioned.
3 In any event, it was before a formal Board meeting or after
4 a formal meeting or in the smaller groups when you would
5 answer questions and try to deal with their problems?

6 A That is essentially correct.

7 Q Now the photographs that we have talked about
8 here were used in that capacity by you, were they not,
9 which helped them to understand and explain?

10 A By myself and by all of the members.

11 Q I understand. I am not limiting it to you.

12 A I want to be real clear.

13 Q You're the only one I can ask the question of
14 now, Mr. Edwards. You and the other members of the
15 Lockheed group, the four of you and the other technical
16 people?

17 A Absolutely correct.

18 Q I am not limiting it to you.

19 A We understand each other.

20 Q All of you had this and there was quite a
21 quantity of pictures at the end, wasn't there?

22 A Yes, sir, there were.

23 Q Do you have any idea about how many there were?

1 A Not really.

2 Q Have you seen --

3 A There were many, okay, that is all I can say.

4 Q Some hundreds?

5 A I would say hundreds, yes.

6 Q Now did you ever have an opportunity to see
7 Walker Exhibit No. 3?

8 MR. DUBUC: You better tell him what that is.

9 BY MR. LEWIS:

10 Q Recently at, I think I have a photostat of that.

11 MR. DUBUC: He doesn't know it by Walker 3.

12 MR. LEWIS: Excuse me just a moment. I will
13 have it in a minute.

14 BY MR. LEWIS:

15 Q Let me ask you, if I can describe it, we have
16 a photostat of the pages or a Xerox, whatever you want to
17 call it. It's a looseleaf binder, several inches thick,
18 three-ring with between seven and eight hundred numbered
19 pages, numbered photographs in the contact print size,
20 .35mm strips, and there are some larger than that. I just
21 wondered if anybody had ever shown that, did you see that
22 recently?

23 MR. DUBUC: He has seen this, this may speed it

1 up, he has seen what I am led to believe are copies of
2 the pictures in Walker Exhibit 3. I have not checked each
3 one against the other.

4 BY MR. LEWIS:

5 Q I am not asking you to check them. I wonder
6 if he has seen it. Has he seen the book?

7 MR. DUBUC: No, I don't think he -- we don't
8 have the book but he has seen what was delivered to me
9 within the last two or three days by Mr. Piper following
10 the Walker deposition, a copy of what is purported to be
11 the pictures in the Walker Exhibit 3. It is the same
12 photos you got from Mr. Piper.

13 MR. LEWIS: I am sure they are. I am not
14 really trying to quibble.

15 MR. DUBUC: I am trying to tell you what he
16 knows, that is what he is talking about.

17 THE WITNESS: That is the Walker exhibit?

18 MR. DUBUC: I don't know whether it is a
19 Walker exhibit, the photos are purported to be the same
20 in that exhibit.

21 MR. LEWIS: Mr. Reporter, would you --

22 MR. DUBUC: But not all of them.

23 MR. LEWIS: I understand there are some that

1 aren't there. The unknown.

2 Mr. Reporter, would you just mark this piece
3 of paper where the witness has shown the approximate photo
4 size as Exhibit No. W-1.

5 (The document referred to was marked
6 Exhibit No. W-1 for identification.)

7 BY MR. LEWIS:

8 Q Mr. Edwards, let me show you some pictures that
9 I understand, and it's been represented to me by the United
10 States, and let me also -- strike that.

11 We didn't note for the record that Mr. Piper is
12 not present, he got notice of the deposition. He wasn't
13 present yesterday afternoon.

14 MR. DUBUC: Right.

15 MR. LEWIS: For the deposition, we undertook to
16 call him, we waited some while for him. It was a consensus
17 of counsel present that he elected not to attend, is that
18 correct?

19 MR. DUBUC: I haven't talked to him, but you and
20 I did discuss calling him. He was called, I just -- we
21 don't have to go anymore than that.

22 Let's go off the record.

23 (Discussion off the record.)

1 MR. LEWIS: On the record.

2 For the record, Mr. Fricker called Mr. Piper
3 at our request, our joint, Mr. Dubuc and my request and he
4 was advised that Mr. Piper was out of the office and he
5 left his number to be called and I suggested we can call
6 him again.

7 MR. DUBUC: I thought that is what we would do.

8 MR. LEWIS: Just to make sure.

9 MR. DUBUC: Maybe if I call him.

10 MR. LEWIS: I am happy to have you call him.
11 We will take a brief recess and you can call him.

12 (Discussion off the record.)

13 MR. LEWIS: On the record.

14 Mr. Dubuc, I understand you just talked to
15 Mr. Piper?

16 MR. DUBUC: He said proceed without him. He
17 is not available, he said to go ahead and proceed.

18 MR. LEWIS: Fine, thank you. Why don't we
19 adjourn for a minute.

20 (Whereupon, a short recess was taken.)

21 MR. LEWIS: Let's go on the record.

22 BY MR. LEWIS:

23 Q Sir, while we were in a recess, I, with

1 counsel's permission showed you a group of photographs
2 which you know, look to me like the Accident Board and the
3 official party including the technical representatives, is
4 that accurate?

5 A I cannot attest to this being a Board meeting.

6 Q I am not suggesting it was in a Board meeting,
7 I am saying are those Board members?

8 A Members of the entire team.

9 Q Yes.

10 A And various members are present in these
11 pictures.

12 Q Are you in any of them?

13 A In flipping through this very quickly, I don't
14 see myself in a single picture. One picture I had a little
15 doubt about, I saw it wasn't me. I don't believe I show
16 up in a single picture.

17 Q Did you notice Mr. Lovelace or Mr. Dobson or
18 Mr. Carrant in any of those pictures?

19 A Mr. Lovelace and Mr. Dobson are in some of the
20 pictures. Mr. Jim Carrant I am in doubt about. There was
21 one picture of the back of a man's head with white hair,
22 but I can't really say whether that was Jim Carrant or not.

23 Q But in any event, does that look like the room

1 that the Board met at at Clark Air Force Base, was that at
2 Travis Air Force Base?

3 A I was never at Travis so I don't know what that
4 room looked like. I believe this was the room at Clark.

5 Q That's in the Philippines?

6 A This was our regular working room, it may also
7 have been the Board room.

8 Q I understand that. It was the room, in any event,
9 that you discussed technical problems with Board members?

10 A Yes.

11 Q That you have already told us about?

12 A The room where we discussed problems with
13 everybody.

14 Q I understand. I am not limiting it to you,
15 Mr. Edwards, the technical representatives for Lockheed and
16 the other companies discussed it with the Board members?

17 A That is correct.

18 Q Now what other technical representatives were
19 there in addition to the Lockheed Aircraft Company? I am
20 speaking of civilians now.

21 A In one of those pictures, I see a Mr. Harold
22 Howard who is a civilian employee of the Air Force at
23 Wright Patterson Air Force Base. I honestly don't recall

whether he was an official Board member.

I saw another gentleman there from, again a civilian employee out of San Antoine Air Materiel, which is Kelley Air Force Base.

Q That is Marvin Martin?

A Right.

Q And he was an employee of the United States?

A He is a civilian employee of the United States Air Force, whatever.

Q Now what other technical advisors or technical representatives were there of non-governmental nature, exclusive of Lockheed people?

MR. DUBUC: Of what, non --

BY MR. LEWIS:

Q That worked for the Government in some capacity with the Air Force or civilian or some other service.

A At one time there was a gentleman there from the National Transportation Safety Board, I believe it was. I believe that is a government employee also.

Q Do you remember his name?

A I don't recall his name right now. I would have to look at some of the records to find his name.

Q I do believe that is an agency of the United

1 States.

2 A I don't recall any people other than government
3 employees.

4 Q And Lockheed?

5 A And Lockheed.

6 Q Now let me show you what has been marked as
7 Walker Exhibit No. 3, what I am showing you is not the
8 original exhibit, sir. It is a Xerox of the pages of the
9 exhibit which we made while the exhibit was here. These
10 were in a looseleaf binder as I have described, with a
11 heavy black cover.

12 MR. DUBUC: We don't have one, maybe afterwards,
13 we don't have a Xerox copy of 3.

14 MR. LEWIS: I don't mind, I would be glad to
15 accommodate you.

16 MR. DUBUC: Don't do it now.

17 MR. LEWIS: We were told by the Government that
18 they would give us, you know, actual photographic quality
19 copies.

20 MR. DUBUC: I see.

21 MR. LEWIS: And I think that is due any day.
22 I would be happy to copy this, the problem with a photostat
23 of a photostat of a photograph isn't marvelous. This is the

1 best I have right now.

2 MR. DUBUC: I just want a complete record
3 after the deposition.

4 MR. LEWIS: I will be glad to see that you have
5 that.

6 BY MR. LEWIS:

7 Q Now would you look at those?

8 MR. DUBUC: Off the record.

9 MR. LEWIS: On the record.

10 I am going to talk about those.

11 MR. DUBUC: I wonder if we can put a five on
12 for page five so we know what page we're looking at.

13 MR. LEWIS: That is fine.

14 MR. DUBUC: The first page we're looking at
15 is an unnumbered page before you have four unnumbered
16 photographs which precede page six, which had several
17 photographs numbered one through seventeen.

18 BY MR. LEWIS:

19 Q Looking at that, have you had an opportunity,
20 as I understand it, counsel, sir, to look at those photo-
21 graphs in somewhat of a larger form recently, is that
22 correct?

23 A I saw some larger black and white photographs,

1 yes. They may be the same as these.

2 Q Would you look through that exhibit, and I am
3 not asking you to state whether they're the same, I will
4 represent to you that the Government represented that they
5 were, to the extent that the larger ones were, you know,
6 that they had negatives, that they were accurate. There may
7 be some that weren't reproduced in larger form. My under-
8 standing is that all of the ones that we got are included
9 in there and I just wanted to know if those are the type
10 of pictures that were available to the Board at Clark
11 Air Force Base?

12 A These were the type of pictures, I believe,
13 that the form in which I saw them on the table, that they
14 were larger than what you see in this book.

15 Q I understand that. If you want to look through
16 the book and see if there are a variety of different kinds
17 of pictures, there may be some pictures taken subsequently
18 at Travis. I am not including those in my question. I
19 don't know whether or not there are, but there may be. But,
20 I am just -- there is a number of pictures that obviously
21 were taken in Saigon.

22 MR. DUBUC: Well, you understand his problem?

23 MR. LEWIS: I understand.

1 MR. DUBUC: He hasn't seen Walker 3, he has
2 seen pictures delivered to us which are apparently enlarge-
3 ments of some of the exhibits in Walker 3.

4 MR. LEWIS: I believe most of them.

5 MR. DUBUC: That is the extent we know about.
6 He hasn't made any comparisons against what he has seen.

7 MR. LEWIS: I am not asking him to compare them.

8 MR. DUBUC: He can tell you the kinds of
9 pictures. If you're going to get to exact pictures, I
10 think we better show him the pictures.

11 MR. LEWIS: I would like to assume for the
12 purposes of my question that the Government has represented
13 that of the larger pictures you were shown by counsel
14 recently, that they are represented in that book, but all
15 of those books were not enlarged because they didn't
16 apparently find the negatives. I just wanted to know if
17 those are the type of pictures.

18 MR. DUBUC: The type of pictures?

19 MR. LEWIS: That were available to the Board
20 and to you in Clark Air Force Base, except for the pictures
21 obviously taken at Travis.

22 MR. DUBUC: I think he did answer that, they
23 were the type, but larger.

1 THE WITNESS: They are the type, as I recall,
2 they were actual black and white photos, somewhat larger.
3 The difficulty I have is that I have seen various scenes
4 and various pictures of these same areas and therefore I
5 would be apt to say yes, I have seen this picture, and it
6 may not be that exact picture. It may be a picture of the
7 same scene, but not this exact picture.

8 BY MR. LEWIS:

9 Q I understand. Ground level pictures, there are
10 a number of them in there of the wreckage and that sort of
11 thing?

12 A Yes.

13 Q That sort of thing was available to the Board
14 at Clark Air Force Base, as you described, is that correct?

15 A That is correct.

16 Q Now I have just shown you earlier some pictures
17 of the room which you said was the room that you met with
18 Board members in, was this the size of the pictures that
19 were on the table?

20 A My recollection is that they were slightly
21 smaller than that, but here again, this has been some time.

22 Q I understand.

23 MR. DUBUC: Do we have any idea of knowing what

1 we are looking at?

2 MR. LEWIS: Off the record.

3 (Discussion off the record.)

4 MR. LEWIS: On the record.

5 MR. DUBUC: Do we have a pending question?

6 MR. LEWIS: I am just waiting for the witness.

7 BY MR. LEWIS:

8 Q You have looked through, I understand briefly,
9 the Walker Exhibit No. 3. Do you recognize any of these
10 pictures?

11 MR. DUBUC: You mean as pictures or what the
12 scene represents?

13 BY MR. LEWIS:

14 Q Firstly, as pictures.

15 A I recall some pictures, some of these pictures
16 definitely I can say I have seen before. I can't say
17 certainly that I have seen all of them.

18 Q I understand that. Have you seen many of them?

19 A Yes, I have seen many of them.

20 Q Have you seen most of them?

21 A I would say probably I have seen 30 percent
22 of these pictures.

23 Q Now where did you see them?

1 A Well, I saw them at various places, but most
2 of the pictures that I really looked at that I see in here,
3 a great percentage were at Clark Air Force Base in the
4 first three weeks. Some of these pictures, I believe,
5 were subsequently taken at Kelly Air Force Base of detailed
6 parts just before they went into the lab analysis.

7 Q Kelly Air Force Base?

8 A Yes.

9 Q All right. And those are the ones that are of
10 the washed parts?

11 MR. DUBUC: Well, you're characterizing them as
12 washed parts.

13 MR. LEWIS: The Accident Board says that they--

14 MR. DUBUC: They cleaned the parts.

15 MR. LEWIS: They were taken and photographed,
16 washed off and reassembled in a hangar. I don't know that
17 that is an essential point.

18 MR. DUBUC: He testified before that there was
19 some cleansing process for inspection. I don't know whether
20 they're washed parts.

21 MR. LEWIS: Washed off.

22 MR. DUBUC: Wasn't the context of that a
23 clean-up inspection?

1 MR. LEWIS: I will withdraw the question and
2 ask you the parts that were photographed at Kelly Air Force
3 Base, the ones that are individual parts.

4 THE WITNESS: I would say that the ones were
5 taken at Kelly were of very small parts, detailed parts,
6 they had been cleaned.

7 BY MR. LEWIS:

8 Q I am not really trying to get into the cleaning
9 question. Would you look and give me the numbers of the --
10 if you look back, you will see that on that exhibit there
11 are some faint page numbers, maybe I can look over your
12 shoulder. Let's go off the record.

13 (Discussion off the record.)

14 MR. LEWIS: On the record.

15 BY MR. LEWIS:

16 Q What were you saying, sir, you were just scanning
17 them?

18 A Off the record?

19 (Discussion off the record.)

20 MR. DUBUC: Now on the record, we have just
21 discussed the fact that we're having great difficulty, Mr.
22 Edwards has said he has great difficulty seeing these
23 Xeroxed pictures and I told Mr. Lewis that we have a

1 numbered set which came to us unnumbered and one of my
2 associates, Mr. Almey, I think has endeavored to number
3 from either this document or some other list. I can't
4 vouch for the numbering, but in the spot check we just did,
5 it seems to disclose that the numbers may be reasonably
6 accurate. To that extent, I think we're agreed that Mr.
7 Connors will have our set of prints which correspond to
8 the set of prints Mr. Lewis has, ours being numbered by
9 the possibly inaccurate method I have just described, and
10 his not being numbered. For the purposes of trying to
11 speed it up, we will have Mr. Connors endeavor to show
12 Mr. Edwards our photographs, and we will make a comparison.

13 MR. LEWIS: I understand completely, Mr. Dubuc,
14 that you don't represent that these numbers are presently
15 the ones there.

16 MR. DUBUC: I can't do that.

17 MR. LEWIS: The person that numbered them is
18 not here. We did a check and it looks like that is the
19 case. It may turn out that it's not the case.

20 MR. DUBUC: If we get to any detail on the
21 picture, we're going to try to cross-reference it.

22 BY MR. LEWIS:

23 Q Could I have Exhibit No. 3 back, please, so I

1 can use that.

2 MR. DUBUC: Off the record.

3 (Discussion off the record.)

4 MR. LEWIS: On the record.

5 BY MR. LEWIS:

6 Q It looks to me, Mr. Edwards, like the first
7 group of pictures in what I have called Walker Exhibit No.
8 3, and going up to Exhibit -- it looks like 348, I can't
9 see on my copy too well, would you look at 348?

10 Where was that picture taken, would that have
11 been this Kelly or in Vietnam?

12 MR. DUBUC: 348, can we see yours?

13 MR. LEWIS: I think it is the same one. No
14 it isn't either.

15 MR. McMANUS: 348 is this one.

16 MR. LEWIS: I am sorry, 348, they run down
17 this way on the copy I have, Harold, you can't read the
18 number at all. Since this picture was 350, I thought this
19 was 348. There is one right in the middle, if you want
20 to satisfy yourself with that.

21 MR. DUBUC: That confirms our methods, everybody
22 is having trouble.

23 BY MR. LEWIS:

1 Q Well, then let's -- what would that be, would
2 you look at 344, sir.

3 MR. DUBUC: We're looking at 347. We're looking
4 at 347 and we looked at 348.

5 BY MR. LEWIS:

6 Q Were 347 and 348, where were they taken, Mr.
7 Edwards?

8 A 347 is a picture that shows some parts lying
9 on the shipping pallet and looking at the terrain and there
10 is a sidewalk in the background, I would say that these
11 pictures were probably taken after the parts had arrived at
12 Clark Air Base, both pictures, 347 and 348.

13 Q Now there is a group of similar pictures, Mr.
14 Dubuc, could you look over my shoulder?

15 MR. DUBUC: Sure.

16 MR. LEWIS: I don't want to ask Mr. Edwards
17 again to look at the same thing. Off the record.

18 (Discussion off the record.)

19 MR. LEWIS: On the record.

20 BY MR. LEWIS:

21 Q Mr. Edwards, I don't want you to, you know,
22 strain your eyes looking at my copy of Walker Exhibit No. 3
23 right now. If we can get a copy, you know, of the original

1 photographic quality, I would appreciate it if you would
2 undertake to show me which were the Clark Air Force Base
3 pictures in the Philippines, and which were the ones taken
4 at Kelly or wherever the others were taken.

5 Now I will try to get that from Mr. Piper so
6 we could maybe do that at a recess or something.

7 A I wouldn't mind looking at individual pictures,
8 but to express my opinion even from that 914 copy is
9 difficult.

10 Q Maybe during the recess or something I can get
11 the precise numbers and show you, walk you through it, and
12 it looks like to me, and you can see if that is what it is.
13 Let me show you an exhibit which has been identified as
14 Walker Exhibit No. 2. This is again a Xerox and not the
15 original.

16 Did you ever see that photograph when it
17 arrived at the Board, and I don't mean during an official
18 Board meeting, but any time around that?

19 MR. DUBUC: Could we have the natural picture?
20 Do you have the print of that?

21 THE WITNESS: I can handle this one. I have
22 seen this part. Now, I don't know that I have ever seen
23 this picture and sometimes it's difficult for me to say

1 that distinguishing between the part and telling you
2 precisely that I saw the part. This is the ramp, obviously,
3 that was recovered out of the ocean, and the first time that
4 I ever saw this part was at Kelly Air Base, Texas.

5 BY MR. LEWIS:

6 Q It's my understanding that the Board requested
7 the Navy to retrieve some of the parts from the South China
8 Sea and the Navy did so. I also understand that the Board
9 requested the Navy to expedite a photograph of the recovered
10 parts and that this Exhibit No. 2 is the photograph that
11 was sent to the Board by the Navy.

12 Now I am saying Mr. Piper said that on the record.
13 I think I have stated it accurately. I am just wondering
14 when that came in if you had an opportunity to see that.

15 A I can't say with any degree of certainty that
16 I ever really have seen this picture. My problem is yes,
17 I saw the part, I really can't say I saw the picture, but
18 I do recognize the ramp.

19 Q Let me help you with your recollection, if that
20 is possible. Have you ever -- did you see it recently?
21 You haven't seen it recently?

22 A I have not seen it recently. I can't say I ever
23 saw this picture.

1 Q Let me call something to your attention that
2 might help refresh your recollection.

3 It appears that this was taken aboard ship,
4 the man appeared to be a sailor, there is a medallion on
5 the shirt, his face isn't showing, but there is a medallion
6 on his shirt which seems to indicate that it's the United
7 States ship America and if you will notice also, the man is
8 holding his penis in his hand and it is in many ways a very
9 remarkable picture, and I wonder, does that refresh your
10 recollection as to whether you have seen it?

11 A No, sir, it does not. Those are your words as
12 to what he is holding, they're not mine. I can't say I
13 have ever seen this picture. I didn't look at the man, I
14 looked at the part. I didn't observe the medallion on the
15 shirt. I am preoccupied with the part, okay.

16 Q I understand.

17 A That was the only important thing to me.

18 Q Did you see a picture of parts like this,
19 forget the man part of it, sometime in connection with the
20 Board?

21 A I saw the part.

22 Q Photographs of the part?

23 A I saw the part and see that is, as I stated

1 previously, I don't know that I would really pay much
2 attention to the picture because I saw the part.

3 Q Do you remember a picture coming from the Navy
4 that caused any stir among the Board members because of its
5 nature?

6 A I don't recall it, no.

7 Q Now, I don't mean to tax you on this, I just
8 want to be clear. Are you saying that you never saw a
9 picture of the part before you saw the parts?

10 MR. DUBUC: Which part, that one?

11 MR. LEWIS: As shown.

12 MR. DUBUC: The ramp?

13 BY MR. LEWIS:

14 Q Shown in Exhibit No. 2.

15 A Just of the ramp.

16 Q Yes, sir, and there are some, you know, attach-
17 ments to the ramp.

18 MR. DUBUC: It's all part of it.

19 MR. LEWIS: It looks like it's all the same
20 copies of a couple pieces of equipment.

21 MR. DUBUC: The question is, with regard to
22 that ramp, with those parts attached.

23 THE WITNESS: As I recall, I did not see a

1 picture taken by anybody of that ramp prior to seeing the
2 actual ramp itself.

3 BY MR. LEWIS:

4 Q All right, thank you.

5 Did you know Sergeant Tarbell?

6 A The name is familiar.

7 Q He was the official photographer for the Board.

8 A Oh, yeah, that puts it together, I believe so.

9 Q Did you know any of the other photographers,
10 the motion picture photographer, the motion picture or the
11 still photographer?

12 A Not really. In fact I only knew Tarbell because
13 it's somewhat of an unusual name. I didn't know him either
14 before or after.

15 Q I understand. Now the photographs of the parts
16 that you have seen in Walker Exhibit No. 3 that were taken
17 at Kelly Air Force Base, what use was made of those? In
18 other words, do you know why they were taken?

19 A The pictures were taken just for the record
20 since we had the parts. I don't know that I really ever
21 spent a lot of time looking at those pictures, although
22 they were available on the table with all of the others.
23 They were for the record, mostly.

1 Q I understand.

2 A That is my opinion.

3 Q Now in your report which we have seen as
4 Exhibit D-1298, did you consider the structure of the C5-A,
5 in other words, the way it was put together, structural
6 members, what they were made of?

7 A I would say yes.

8 Q Describe the -- strike that.

9 As I understand it, an airplane, in laymen's
10 terms, has a skeleton structure and a skin over the top of
11 that with structural members forming the dimensions of the
12 airplane and the skin is covering that, is that grossly
13 accurate?

14 A Well, the skin actually figures very prominently
15 into the structural analysis. It's really the skin and the
16 structure are really all together. They're both structure.

17 Q This plays a structural part, the skin plays a
18 structural part?

19 A Yes.

20 Q But I am trying to, just so we can have some
21 common nomenclature, me not being an engineer, I am just
22 trying to get words that we could both agree on for what I
23 call the skeleton, whatever it is called, and then we will

1 discuss the skin.

2 What do you recall the part that forms the
3 basic structure of the airplane over which the skin is
4 placed? Does that have a name?

5 A Well, you don't build a structure and have a
6 structure all built and wrap the skin around it. It's all
7 put together and analyzed as a complete entity. So it's
8 difficult for me to say there is a shell for which you wrap
9 around the skin. That doesn't happen.

10 Q I am not trying to suggest that, all right.
11 Name all of the structural parts of this airplane, please,
12 for me. We can start on any one part. Let's start with
13 the fuselage.

14 MR. DUBUC: You mean major structures?

15 BY MR. LEWIS:

16 Q Let's start with major structural parts.

17 A Well, you have the skin, you have ribs, that
18 run certainly around the circumference, you have longerons.

19 Q How do you spell those?

20 A L-o-n-g-e-r-o-n-s. You have beams, you have
21 bulkheads, that is essentially it.

22 Q The longerons you say run fore and aft?

23 A For the most part, yes.

1 Q The ribs run?

2 A Circular.

3 Q Circular more or less?

4 A Right.

5 Q Around the circumference of the hull.

6 What do the beams do?

7 MR. DUBUC: You mean beams in the hull?

8 MR. LEWIS: The beams in the hull.

9 MR. DUBUC: Can we limit this to the hull or
10 are we talking about wings, too?

11 MR. LEWIS: I am starting with the hull.

12 MR. DUBUC: This is the hull.

13 THE WITNESS: We have beams that run fore and
14 aft, we have also beams that run across the ship.

15 BY MR. LEWIS:

16 Q It's my understanding from both your report
17 and my view of the photographs that the empennage broke
18 off with part of the rear or aft fuselage, is that correct?

19 A Well, this is where the empennage begins, this
20 is what we have commonly referred to as the empennage. It's
21 separated from the fuselage approximately ten feet aft of
22 the aft end of the aft troop compartment and then after it's
23 separated, from that point, then in the tumbling thereafter,

1 a part of that, what you may commonly term the aft
2 fuselage, which is still attached to the empennage, it
3 stills lays alongside of it so that shows up in several of
4 the pictures.

5 Q Let me show you Defendant's Exhibit 1212, and
6 would you show me where the empennage separated? I gather
7 it was a vertical separation?

8 MR. DUBUC: You want him to mark on this?

9 MR. LEWIS: Yes, here is a red pen, sir, or
10 you can use your own.

11 MR. DUBUC: I want the record to reflect that
12 Exhibit 1212 is a pre-impact artist conception of the
13 aircraft and not a post-secondary impact artist conception.

14 MR. LEWIS: I am just using it because it is
15 the hull of an airplane that doesn't appear to be damaged.

16 MR. DUBUC: I want the record to be clear, I
17 want Mr. Edwards to explain Exhibit 1212, Defendant's
18 Exhibit 1212, which you asked him to mark on. He is using
19 it only because it is a full hull picture prior to the
20 second impact and I don't want the record to reflect, nor
21 have it suggested later that by using this picture Mr.
22 Edwards is inferring any opinion that, as depicted by the
23 picture, this is where it broke off at that time.

1 MR. LEWIS: I can solve that problem. I am
2 not trying to create any problem at all. Let me show you
3 Exhibit D-1245.

4 MR. DUBUC: D-1245?

5 MR. LEWIS: Defendant's 1245.

6 MR. DUBUC: Which is an overlay artist's
7 conception?

8 MR. LEWIS: Yes.

9 MR. DUBUC: And again we're using it only
10 because it's a full hull rather than suggesting that that
11 is the time and sequence?

12 MR. LEWIS: I am not talking about the timing
13 sequence, I am trying to find out what places the hull
14 broke in two parts, and it looks to me like, and my under-
15 standing of the representations are that there is a crack
16 just forward of the empennage on the hull here, which is
17 where it broke off, is that correct?

18 MR. DUBUC: You understand the question? He
19 is asking for the point on the fuselage where it broke
20 off. He is not asking the time sequence. Based on these
21 photographs, it might help if you use an exhibit that
22 doesn't relate to the time sequence.

23 MR. LEWIS: I don't have one that shows where

1 the defendant put the cracks and I just -- I mean, I was
2 asking him to start from scratch and you objected to that
3 and now I have one that has some cracks in it --

4 MR. DUBUC: If that is all you're asking, if
5 that is where the cracks are, okay.

6 BY MR. LEWIS:

7 Q See the crack just forward of the empennage?

8 A Yes, I do.

9 Q Would you put a red mark with the pen on that
10 copy and show where that is?

11 MR. DUBUC: You're talking about 1245 now?

12 MR. LEWIS: Yes.

13 MR. DUBUC: I will put D-1245 on there, is
14 that the one we're talking about?

15 THE WITNESS: Okay.

16 MR. DUBUC: He has an arrow.

17 BY MR. LEWIS:

18 Q Would you put a red line just to indicate,
19 cover the crack with a red line? Would you put the aft
20 crack reasonable description because there are some
21 forward ones, how would you describe that location?

22 A This is where the major section of the
23 empennage separated from the aft fuselage section.

1 Q But in any event, is that part of the airplane
2 called the fuselage or the hull?

3 A I would call that the aft fuselage.

4 Q If you would just put crack at aft fuselage
5 on top of your arrow. Separation or whatever you think.
6 Let's go forward on that diagram, sir, and you see where
7 just in the vicinity of the wing there is another area
8 which I gather is indicated which is intended to show
9 a place where the hull separated, is that correct, just
10 aft of the wing?

11 A Just aft of the wing, right.

12 Q Would you draw a red line on that and show
13 separation location, just write that. Now would you come
14 forward of the wing and you see there is another separation
15 location, is that correct, sir?

16 A That is correct.

17 Q Would you mark that, in other words put a red
18 line on it so it will stand out, wherever that should be
19 and put separation location. I guess we have to repeat
20 that unless there is a more accurate way to put that.

21 Thank you. Now are those the three places
22 where in your view the hull separated into parts?

23 A They are the three major initial separation

1 points.

2 Q Since we started with the aft, what are the
3 major structural members that in an intact airplane bridge
4 the aft separation area? In other words, what parts had
5 to be served, what structural parts had to be separated
6 for that to detach?

7 A The upper portion of this which is the skin
8 and ribs that we discussed previously, the skin could have
9 just pulled and failed in tension and pulled on the very
10 lower portion. There is a longeron that goes back through
11 that area, I don't know that we have ever really looked
12 to see if that longeron separated or if the skin tied to
13 that longeron just pulled off of it.

14 Q Well, is it correct, isn't it that all around
15 the tube and the hull is a tube in that area, more or less?

16 A Yes, it is.

17 Q I am just trying to use layman's language.

18 A It's a cylindrical structure.

19 Q All right. In running fore and aft all around
20 that tube are structural members like, I don't know whether
21 you call them longerons, whatever they're called, and they
22 completely -- they go all of the way around to provide
23 strength?

1 A The longeron would go fore and aft, alongside
2 the doors that open back there.

3 Q How many longerons are there in that hull
4 section going all the way around in the 360 degrees?

5 A Well, there are the two major longerons, one
6 on each side that form the edge of the door opening and
7 then along the -- what is commonly referred to as the
8 torc deck. I don't know whether you would call that a
9 longeron, but the torc deck joins -- the torc deck is a
10 horizontal structure that joins the skin which is circum-
11 ficial structure. I don't believe you would call that a
12 longeron.

13 Q You're talking about the torc deck?

14 A The torc deck.

15 Q Any other longerons or structural members of
16 that kind?

17 A I don't know, I don't recall all that detail.
18 I am sure there are.

19 Q Are you say there aren't or you don't know?

20 A I am saying I don't recall.

21 Q Because, well, you have described two major
22 ones on each side, right?

23 A On each side that form the door opening.

1 Q That forms the door opening. Is there one
2 on the top.

3 MR. DUBUC: You're talking about door opening,
4 what door?

5 THE WITNESS: The aft cargo door system.

6 BY MR. LEWIS:

7 Q Well I would like you to describe in as complete
8 detail as you can in whatever engineering words that are
9 appropriate, you don't need to use layman's language, I
10 will have to get somebody to translate it, what structural
11 beams or joists or longerons or what have you exist in the
12 360 degrees circumference at that aft separation? You
13 have mentioned two, one on each side and the torc deck,
14 whatever you would call that. Anything else? Are there
15 any others of any dimensions?

16 A I don't recall, I just don't remember because
17 when that was designed, I really was not responsible for
18 the structure of the C5, I was the functional systems and
19 therefore I didn't spend all that much time on those things.

20 Q You really didn't study that part?

21 A I didn't design it, no, sir. I was not in
22 charge of the design of that.

23 Q Have you studied that when you did your report,

1 when you made this report that was done, whenever it was
2 done, that's Exhibit 1298?

3 A Oh, I recall the structure as we observed it
4 at the accident site, but I didn't go back and look at all
5 of the stress analysis and et cetera. It was obvious that
6 it tore apart at that point.

7 Q I understand that, but I am anxious to find out
8 the dimensions for example, of the longerons there and the
9 metal they were made of in their stress capacity in every
10 dimension, can you tell me that?

11 A I cannot recall that kind of detail. In fact,
12 as I stated previously, I was not in charge of that detail
13 design.

14 Q Did I understand that -- did you calculate
15 or in your work on Exhibit D-1298, did you calculate that?

16 A No, I did not calculate that.

17 Q So in doing 1298, you didn't determine how many
18 longerons or other structural members ran fore and aft in
19 that area, is that correct?

20 A I did not say that again, I did not.

21 Q You didn't determine how many longerons existed
22 in the area that separated near the empennage by number?

23 A No, I didn't, I didn't count them, no, sir.

1 Q And you didn't calculate or you didn't go to
2 find the dimensions of those longerons, did you?

3 A I did not consider that pertinent because I
4 guess the consideration was that the aircraft was eroding
5 away, small piece by small piece, during this skidding type
6 operation, that these cracks and little pieces of the
7 structure that are torn off, that actually deteriorates
8 the total structural integrity of that area, and that it
9 would be very unlike an analysis of trying to analyze a
10 complete structure undamaged as to what kind of loads,
11 stresses, et cetera it would take to tear it apart because
12 of the erosion and cracking operation.

13 Q I have your answer, my question was did you
14 determine the dimensions of the longerons in that area and
15 in an intact airplane?

16 A I was merely trying to answer that by saying
17 that in my opinion that was not pertinent and for those
18 reasons, I just gave.

19 Q The answer is that no, you did not do that?

20 A The answer is no, I did not do that because in
21 my opinion it was not pertinent.

22 Q Did you determine the type and compensation of
23 the metal in those longerons?

1 A Same answer as before.

2 Q You didn't do that because you didn't think it
3 was pertinent, is that correct?

4 A That is the answer.

5 Q Are there any other structural members with the
6 exception of the longerons in the skin in that area that
7 go fore and aft?

8 A I don't recall.

9 Q Are you saying there aren't any or you don't
10 know?

11 A I said I don't recall.

12 Q That means that at this time you don't know,
13 is that correct?

14 A At this time I don't recall, I am sorry.

15 Q Now, let's go forward then to the next separation,
16 the one aft of the wing. Describe the structural
17 members in a 360 degree circle that run fore and aft or
18 that provide any fore and aft support at the area of that
19 separation?

20 A At the point in time at which I believe the
21 separation occurred, there is a great deal of difference?

22 Q I am speaking prior to impact.

23 A Prior to impact?

1 Q Prior to impact. All my questions are prior to
2 impact and we will talk about impact later. I want to talk
3 about an intact airplane like before it separated.

4 A Well, on the top portion of that troop compart-
5 ment, I am talking about the upper hemisphere, you have
6 essentially the same things that we have talked about in the
7 aft end and that is you have the skin and the ribs and in
8 this case, stringers that run fore and aft and this goes
9 and then also you have the floor structure of that aft
10 troop compartment which also figures into the structural
11 analysis.

12 Q Any other structural members?

13 A Going down the side of the cargo compartment,
14 then again you have skin, stringers, ribs, longerons, and
15 then you get down to the cargo floor and the cargo floor,
16 it's -- call it an intense structure.

17 Q Very strong?

18 A Very strong structure, it comprises the entire
19 cargo floor. This is a very complex, built-up structure
20 in the floor, the structure is supported by floor bulkheads
21 which are built-up bulkheads, you have beams running fore
22 and aft that the center line of the aircraft underneath
23 floor, you have longerons on either side of the floor and

1 various types of structural members to tie the structure
2 of the floor up into the side walls.

3 Q All right, sir. Now did you say that the hull
4 separated at that point, is that correct?

5 A The hull separated at that point, I really don't
6 understand that question.

7 Q We have talked about a separation in the stern,
8 was there a separation at that point?

9 A A separation at that point, but the separation
10 in my opinion took place prior to the erosion away of the
11 belly skin, the floor bulkheads that run to the left and
12 right, the fore and aft beam was eroded away, the longerons
13 structure on that floor was eroded away and then the floor
14 itself thereby was no longer a part of the structure and
15 after it eroded away and then that is when the cracks in
16 my opinion went up the side and it separated after the
17 wing and before the wing, and I don't think that could
18 have happened until you had this erosion which ate away
19 all of the stuff under the floor and it separated the
20 floor itself.

21 Q Did the floor erode away?

22 A The floor eroded away and this is in bits and
23 pieces and some bits and pieces were rather small and some

1 were larger.

2 Q Now tell me then, and I want as much detail as
3 you can give me, how many longerons were there in a 360
4 degree circumference of the hull at that point? I am speaking
5 of the separation immediately after the wing.

6 A Well at the floor attachments, there is one on
7 the left and one on the right and longeron in the terms in
8 which we have been using.

9 Q Any more?

10 A Well, I spoke previously of the beam which runs
11 fore and aft which is a built-up beam. It's somewhat like
12 a keel beam on a Naval vessel.

13 Q There is one beam and two longerons in that
14 section in the complete 360 degree circumference, is that
15 correct?

16 A In general terms, that is true.

17 Q I mean precisely, sir, as good as you can tell
18 me, if you don't know, I guess I will accept that. I want
19 to have you give me as an accurate description of the
20 structure of the hull in that point so I am asking you how
21 many longerons there are and are there more than two?

22 A In the terms we are using, I would say two,
23 one on the left and one on the right, and other people

1 may choose to call some of this floor structure longerons,
2 it's semantics.

3 Q What are the dimensions of the beams which would
4 be a keel in a Naval vessel?

5 A That keel beam is a built-up structure.

6 Q Is it a joist?

7 A A joist?

8 Q Yes.

9 A It's a continuous bulkhead type, fore and aft
10 bulkhead, it's a built-up structure.

11 Q Just describe it as precisely as you can.

12 MR. DUBUC: He is trying to do that.

13 THE WITNESS: I would say in height it's about
14 three feet, in width it's corrugated structure, sometimes
15 honeycombed structure, probably two inches thick and it
16 runs the entire length of the aircraft which is 120 feet
17 probably.

18 BY MR. LEWIS:

19 Q Did you calculate the strength of the beam or
20 its capacity in any way?

21 A I will have to give you the same answer as I
22 gave before, that as an airplane skidded through the rice
23 paddy throwing the --

1 Q I understand your theory, I am anxious to know
2 whether you calculated the strength of the beam. If you
3 don't think that was necessary, you can tell me that.

4 MR. DUBUC: Just let me note an objection to
5 the general form, maybe that is not the problem. He may
6 be having some trouble with strength as far as what vectors
7 you're talking about. Strength as the airplane sits on
8 the ground, strength as it flies, or strength in a stress
9 situation.

10 MR. LEWIS: Any kind, if he did any kind of
11 calculations.

12 MR. DUBUC: He doesn't think of just strength,
13 he is thinking of stress, strength, and so on.

14 MR. LEWIS: I understand that, I will go through
15 each category with him.

16 MR. DUBUC: Those are not calculated. Those
17 are tests that are being a matter of statistics.

18 BY MR. LEWIS:

19 Q Did you try to determine what the capacity of
20 that beam was in any way?

21 A The strength of that beam had been calculated
22 and had been tested to all of the requirement standards
23 for the vehicle.

1 Q I understand that.

2 A In the normal test environment.

3 Q Did you check those when you wrote the report
4 12987

5 A I would like to state this in my own words,
6 please, and that is that in this erosion and tearing away
7 process that we have talked about previously, the previous
8 established and tested strength of that keel beam really
9 had -- was not pertinent to the method in which it failed
10 because it failed after it had been eroded away by the
11 skidding, and therefore the original strength was not
12 subject to question and the original strength was not
13 pertinent to the manner in which it failed due to this
14 erosion.

15 Q Did Lockheed Aircraft Corporation, they have
16 data about the strength of that particular beam or its
17 capacity?

18 A Absolutely.

19 Q And did you check that in your analysis of
20 what happened in those cracks?

21 The answer is no, is that right?

22 A I will say again in my opinion the original
23 strength was not pertinent under these failure conditions.

1 Q I am just asking whether you looked at it or
2 not. You don't want to tell me for some reason, it would
3 be simpler if you would say yes or no.

4 MR. DUBUC: He can tell you in his own words.
5 As you said originally, we're dealing in laymen terms
6 versus engineering terms so he is responding in the
7 engineering aspect. He is trying to do the best he can.

8 BY MR. LEWIS:

9 Q Did you calculate or check the dimensions of
10 the longerons in the separation that took place in the aft
11 portion of the wing of the fuselage, in the aft portion of
12 the wing?

13 A No, because in my opinion it was not pertinent
14 and I didn't bother myself with it.

15 Q You didn't check the dimensions, you don't
16 know the metal or you have the same answer, that you gave
17 with respect to the area near the empennage, is that
18 correct?

19 A Same answer, same reason.

20 Q Now how many stringers are there in the
21 circumference in the hull of that location?

22 A Numerous is all the answer that I can give you.

23 Q What is the dimension of those stringers --

1 stringers go fore and aft, is that correct?

2 A True.

3 Q What are their dimensions as accurately as you
4 can give them to me?

5 A I don't recall the dimensions.

6 Q Do you know what type of -- do you know the
7 metal and specifications of the metal?

8 A I can't give that to you right now, no, sir.

9 Q Do you have any information as to how the --
10 what tests -- they were tested, were they not?

11 A They were tested as part of the completion
12 structure.

13 Q Do you know any of the results?

14 A I do know they passed all of the test require-
15 ments.

16 Q I understand that. Did you calculate the
17 number of stringers and the test results when you wrote
18 your report D-1298 at the time you did that?

19 A Well, to save us some time, the same answer
20 and the same reasons as the past two.

21 Q The answer is no, you did not?

22 A Right.

23 Q Now in addition to the stringers and the beam

1 and the longerons, there is skin in that location, right?

2 A Yes, sir.

3 Q Now what was the test, first what kind of metal
4 was the skin at that location, you know the specification,
5 the alloy of the skin?

6 A It varies in areas of the aircraft.

7 Q That is why I asked specifically that area.

8 A It varies in thickness throughout the aircraft,
9 depending on the amount of load it has to carry. I did not
10 go back and check the metal alloy of that skin in the
11 area or the dimensions of the skin in that area because
12 here again, whatever the requirements were in the aircraft,
13 all that structure had been subjected to and it passed all
14 of the tests.

15 Q So Lockheed Aircraft Corporation has data on
16 the thickness of the skin in that area, right?

17 A Absolutely.

18 Q They have data on the alloy of the skin in that
19 area, is that correct?

20 A Yes.

21 Q And its structural characteristics are known
22 by tests, actual testing, is that right?

23 A That is true.

1 Q Now you didn't check any of that data when you
2 did your work and arrived at your conclusions as to how this
3 airplane broke apart, did you?

4 A Same answer, same reason.

5 Q The answer is no because you didn't think it was
6 necessary?

7 A In my opinion, it was not pertinent because of
8 again the erosion, et cetera.

9 Q Now would the same answer be correct for the
10 separation that occurred in the aft area near the empennage,
11 the thickness of the skin and the alloys, you didn't check
12 those either?

13 A Same answer, same reason.

14 Q You did not check that, is that correct, and
15 that is also the data, that data, the thickness of the
16 skin, the alloy and strength, structural characteristics
17 are available to you from Lockheed's records, but you did
18 not check that in your investigation of the accident, is
19 that correct?

20 A Because in my opinion, it was not pertinent,
21 that is true.

22 Q The answer is no.

23 MR. DUBUC: The question, is it on the

1 investigation of the accident?

2 MR. LEWIS: Yes.

3 MR. DUBUC: Or on the report?

4 BY MR. LEWIS:

5 Q Did you check it at any other time other than
6 the accident?

7 A I personally did not check it, no. There were
8 structural type engineers attached to this technical team.
9 I mentioned one previously, Harold Howard, Wright Patterson
10 Air Force Base, who was with the aircraft from its
11 inception in 1965. Whether he checked it or not, I don't
12 know.

13 Q I understand. But you didn't avail yourself
14 of that data when you made your analysis of what you say
15 happened and how the airplane broke apart, is that true?

16 A I did not. I did not think it was pertinent
17 and I also know it passed all of the tests previously.

18 Q I understand that. Now the exhibits that we
19 have been talking or the exhibit is 1298 is your only
20 written report on the analysis of how the airplane broke
21 apart, is it not?

22 A Of course in the accident, in the preparation
23 of the accident report, all technical people had input

1 into that report. Other than that --

2 MR. DUBUC: There is a structural report which
3 is Exhibit D-2, I think.

4 MR. LEWIS: If we have the other one. He is
5 the author of it?

6 MR. DUBUC: There are days of testimony about
7 that. You're not talking about that?

8 MR. LEWIS: Well, are there -- is there any
9 report that we don't have?

10 MR. DUBUC: Summarizing all of this?

11 MR. LEWIS: Your description of how you say
12 the accident happened, how the airplane broke apart.

13 MR. DUBUC: Other than D-2?

14 MR. LEWIS: Other than 1298.

15 MR. DUBUC: He provided input.

16 BY MR. LEWIS:

17 Q You were one of the authors of D-2?

18 A D-2 is the engineering analysis?

19 Q I gather that.

20 MR. DUBUC: I think that is the number.

21 BY MR. LEWIS:

22 Q Whatever it is.

23 A Yes, I had input into that. Other than that

1 and testimony in Court, that is the only document.

2 Q I am not talking about testimony. I am talking
3 about documents. I am trying to identify documents. Now
4 is there any other, the floor of the aft troop compartment
5 is a structural member running fore and aft, is that correct?

6 A That is true.

7 Q Did you calculate what that strength was? In
8 other words --

9 A Same answer and same reason.

10 Q The answer is no because you didn't think it
11 was necessary? That didn't erode away, did it?

12 A I didn't think it was pertinent. That did not
13 erode away, that is true.

14 Q Now, are there any other -- did you calculate
15 the strength of the cargo floor?

16 A Same answer, same reason, Mr. Lewis.

17 Q The answer is no, you did not?

18 A That is correct.

19 Q That data was available to the Lockheed Aircraft
20 Corporation, is that correct?

21 A That data is available.

22 Q Both from the type of metal it's made of, it may
23 be made of more than one type of metal, the type of metal

1 it's made of, the fastenings that were used, it's all very
2 precisely known, is that correct?

3 A That is correct, it is known.

4 Q And you didn't check that, you didn't go to those
5 sources to see anything about that when you made your
6 analysis of how this accident happened, is that correct?

7 A I did not do that because I didn't think it was
8 pertinent under these conditions.

9 Q Now is there a bulkhead in the vicinity of this
10 separation immediately after the wing that provided
11 structural, fore and aft structural strength?

12 A There are bulkheads under the cargo floor, yes.

13 Q Would you describe those as precisely as you
14 can, but what metal were they made of, what are the
15 dimensions?

16 A Those bulkheads, four bulkheads are essentially
17 the same construction as the fore and aft keel beam that
18 we discussed previously.

19 Q What metal are they made of?

20 A Essentially the same types of metal.

21 Q You don't know?

22 A I did not detail because I just don't recall
23 that kind of thing.

1 Q You didn't look it up either?

2 A No, sir, because here again under these
3 eroding and tearing conditions, it was not pertinent
4 because the original strength would have no bearing what-
5 soever on the failure.

6 Q The strength of the material itself is known
7 to Lockheed, the type of material is known to Lockheed,
8 right?

9 A Right.

10 Q And the thickness of the metal is known to
11 Lockheed?

12 A Right.

13 Q And it was tested by Lockheed under different
14 stress conditions, is that correct?

15 A It was tested by Lockheed under the prescribed
16 conditions that exist for all aircraft that have ever been
17 designed.

18 Q I understand that. You didn't undertake to
19 look at that when you formed your conclusions as to how
20 this airplane broke up, is that correct?

21 A No, I did not. Here again it was not pertinent
22 to the method of failure in these circumstances.

23 Q Now is the structure of the hull different in

1 the separation that took place immediately forward of the
2 wing from the separation, from the structure of the hull
3 immediately after the wing?

4 A It's essentially the same.

5 Q And if I asked you all of the questions about
6 the various structural members, you would give the same
7 answer, is that correct?

8 A That is correct.

9 Q You don't know the thickness of the skin, for
10 example, or the metal that it's made up of or how it is
11 tested, any kind of a test, is that right?

12 A I did not bother to review those because here
13 again that information was not pertinent to the type of
14 condition that this aircraft was seeing in this eroding
15 condition.

16 Q Now, did the wing break off at any point?
17 I am not asking you when, I am asking you did they ever
18 break off or separate from the aircraft?

19 A The wings separated as a result of this
20 eroding condition causing the reduction in the structural
21 integrity of the areas fore and aft the wing, and it
22 separated, the wing did not break off, per se.

23 Q So your testimony is that the wing was

1 completely intact when it left the airplane, is that
2 correct?

3 A In my opinion, it was intact when the wings
4 separated from the fore and aft fuselage section.

5 Q Did it ever break up?

6 A Did the wing ever break up?

7 Q Yes.

8 A After this separation, and you must keep in
9 mind that the aircraft still had considerable forward
10 velocity and therefore the wing had an appreciable lift.

11 Q I am not asking you when, it just really
12 prolongs the deposition, I am asking if it ever broke up.
13 If he says yes, I can go to the next question.

14 MR. DUBUC: It's not quite that simple. Why
15 don't you let him finish his answer.

16 BY MR. LEWIS:

17 Q Go ahead. Considerable forward velocity and
18 lift?

19 A And therefore it had lift and it pulled itself
20 up and literally flew through the air and landed upside
21 down, essentially intact as the wing existed, and landing
22 upside down and then the engines were close by and because
23 of all of the heat, in the engines, it ignited the wing

1 and it was mostly consumed by fire.

2 Q Describe or firstly, did the engines ever
3 separate from the wing?

4 A Yes, the engines separated from the wing. The
5 engine pylon combination separated from the wing.

6 Q I will accept that. The pylon, just for the
7 record, is the root or attachment of the engine of the
8 wing, right?

9 A That is the method of extending the engine
10 down from the wing and slightly forward. It's a structural
11 tie between the two, yes.

12 Q Now describe the weight of the engine, how
13 much did one of these engines weigh, do you know?

14 A Approximately the engine and pylon combination,
15 you're talking about 10,000 or 11,000 pounds.

16 Q And can you describe the structure of the pylon?

17 A Not in detail, no, sir.

18 Q Well, tell me what structural members exist
19 between the engine and the airplanes in the area we call
20 the pylon?

21 A Well, in broad terminology?

22 Q I want it precisely in engineering language as
23 you can. I would like you to not use laymen's terms.

1 Precisely how many parts and what they were and how big
2 they were. In other words, use technical words for me,
3 please, in your answer.

4 A You have a pylon box structure and this box
5 structure, the size of the structures are made of a built-
6 up honeycomb sheet metal. It has bulkheads fore and aft
7 and the bulkheads are made up of built-up sheet metal,
8 some aluminum structure, some titanium, and some steel and
9 it varies. These bulkheads, of course, are tied to the
10 honeycombed panels by various types of aluminum, steel,
11 and titanium, angular extrusions.

12 Q Give me the dimensions of the box. Did you
13 calculate that?

14 A No, I did not calculate that.

15 Q Did you calculate the type of metal that was
16 used and so forth and all of the calculations?

17 MR. DUBUC: Do you mean did he calculate the
18 type of metal?

19 BY MR. LEWIS:

20 Q Did you go refresh the precise type of metal
21 and what it tested out to and anything like that?

22 MR. DUBUC: Of the pylon.

23 BY MR. LEWIS:

1 Q Of the pylon and your analysis of how this
2 airplane came apart?

3 A The answer is no and the reason is that exactly
4 as has been given before because in this type of a failure
5 condition, it was not pertinent because here again this
6 same structure had passed all of the tests required of any
7 vehicle, any air vehicle.

8 Q What were the tests that were required for the
9 engine?

10 MR. DUBUC: For the engines?

11 MR. LEWIS: Yes.

12 MR. DUBUC: The engines.

13 BY MR. LEWIS:

14 Q The pylon strength to hold the engines on.

15 A There are several tests but static tests,
16 static strength tests, fatigue life cycle tests, all those
17 kinds of things.

18 Q Did you look that up in coming to your conclu-
19 sion of this accident report?

20 A No, I did not and for the same reasons mentioned
21 several times previously.

22 Q All that data is available at Lockheed, isn't
23 it?

1 A That is true.

2 Q Is there a main bar in the wing?

3 A Yes, there is.

4 Q What are the dimensions, is it a box bar?

5 A There is a structure that is termed, in broad
6 terms, the wing box structure as meaning, which substructure
7 included is the substructure, but the wing box structure,
8 per se, and of course the wing tapers from the fuselage
9 out to the wing tip from a depth of about five feet starting
10 at about five feet at the wing roof.

11 MR. DUBUC: You're talking about where?

12 MR. LEWIS: I am trying to tell him where.

13 MR. DUBUC: On the wing roof.

14 BY MR. LEWIS:

15 Q I understand it changes, and I am just trying
16 to help him by giving him a location.

17 A The thickness of the location at the wing roof
18 is about five feet.

19 Q How wide is the wing at that point?

20 A It's about 20 feet fore and aft.

21 Q Now do you know how thick the metal is on that
22 wing at that point?

23 A Well, the wing scans are --

1 Q Do you know?

2 A I don't know precisely, no. I could only guess.

3 Q I don't want you to guess. Did you calculate
4 the strength of the wing at that point?

5 A Same answer, same reason.

6 Q The answer is no, you did not. You didn't
7 think it was necessary, is that right?

8 A Because I didn't think it was pertinent and
9 that is a great deal of difference between being pertinent
10 and necessary.

11 MR. LEWIS: Off the record.

12 (Whereupon, at 12:30 o'clock p.m., the hearing
13 in the above matter was recessed for luncheon.)

(1:40 p.m.)

AFTERNOON SESSION

Whereupon,

JOHN W. EDWARDS

resumed the stand, and was further examined and testified as follows:

EXAMINATION BY COUNSEL FOR PLAINTIFFS (Resumed)

BY MR. LEWIS:

Q Mr. Edwards, you mentioned this morning in response to a question of mine that you had attended a meeting in August at the Washingtonian Club, do you remember that, sir?

A Yes, sir, but I am not sure it was in August or early September.

Q Whenever it was.

A Right.

Q I believe you said there was only one of them and I stand corrected. I believe you said that you didn't know which time it was, but since there was only one meeting, we don't have any questions about its identification. Do you know what I am talking about?

A I only know of one meeting and that was the one I attended.

Q Now can you tell me who was there?

1 A Well I don't remember all of the people, of
2 course. I don't know all of the people. Of course Mr.
3 Dubuc was there and John Connors, I was there.

4 Q Any other lawyers?

5 A Well, Tom Almey.

6 Q Tom?

7 A Almey.

8 Q Is that a Lockheed attorney?

9 A He is associated with Haight, Gardner.

10 Q But he is working with -- he is -- his client
11 is Lockheed?

12 A I guess you can put it that way, yeah.

13 Q In the same sense as Mr. Dubuc's client?

14 A That is true. Pat Piper, I don't recall the
15 name but there is some lady attorney associated with Mr.
16 Piper.

17 Q Okay. Any other attorneys that you can recall?

18 A Not that I recall, no.

19 Q To your knowledge, was the guardians or any of
20 the attorneys invited?

21 A Say the name again?

22 Q Were the guardians of the children or any of
23 the plaintiffs' attorneys invited?

1 up and say who they were, did somebody introduce them?

2 A You know, somebody says I am so and so and I
3 am kind of bad on names, too.

4 Q Well, I understand. I am trying to do the
5 best I can. Can you remember anybody else that was there?

6 A There was a Dr. Doume and a Dr. Perry, that
7 is about the extent of it, I believe. I may -- that is
8 about the only ones I can remember.

9 Q How many people were there approximately?

10 A Fifteen, more or less.

11 Q When did the meeting start?

12 A When did the meeting start. I am just guessing
13 when the meeting started, mid-morning, somewhere around
14 10:00 o'clock.

15 Q And when did it end?

16 A Early afternoon, I would say 4:00 o'clock,
17 5:00 o'clock, something like that.

18 Q Did you break for lunch or work through lunch?

19 A We had sandwiches on the premises.

20 Q How was the seating, how was it arranged?

21 A Well there were some tables set up in kind of
22 a horseshoe fashion.

23 Q People sit inside and outside?

1 A I have no knowledge of that.

2 Q There weren't any there? You didn't see the
3 guardians or any of the plaintiffs' attorneys there?

4 A They could have been, I wouldn't have known
5 them anyway.

6 Q You didn't see me there?

7 A I didn't see you, no, sir.

8 Q You didn't see this gentleman?

9 A No.

10 Q You didn't see anybody you know associated
11 with the plaintiffs there, did you?

12 A No, I did not.

13 Q Now who else was there?

14 A I remember Dr. Gibbons, I remember Dr. Turnbow.
15 I remember an Air Force pilot, I don't remember his name.
16 There was a young lady associated with the Air Force man
17 in some sense so I don't recall her name or her function.
18 There were several other people that I don't know well
19 enough to remember the names.

20 Q Were you introduced to them?

21 A The peoples names were called out, I just
22 don't remember the names.

23 Q How were they called out, did everybody stand

1 A People sat outside the horseshoe.

2 Q Who was the moderator of the meeting, you?

3 A I was not the moderator. I don't know if there
4 was a moderator. I think everybody kind of just talked.

5 Q Who called the meeting?

6 A I was asked to come to the meeting by Mr.
7 Dubuc's office.

8 Q So as far as you know, it was called by the
9 lawyers as opposed to you or anyone of the other technical
10 people?

11 A I certainly didn't call the meeting, I just
12 responded.

13 Q Now, did you talk in the early part of the
14 meeting?

15 A Yes, I gave an outline of the history, sequence
16 of the starting from the rapid decompression pretty much
17 as I have outlined that sequence before and in Court trial
18 testimony.

19 Q And was it the same as you stated in the
20 Exhibit D-1298, does it cover the same material?

21 A Some of the points in that exhibit were dis-
22 cussed, but not in detail. I did discuss, you know, the RD
23 and about how long it took for the airplane to come down

1 to the first point and the manner in which aircraft contacted
2 the ground at first impact and as the aircraft proceeded
3 across to the second impact and then through the rice
4 paddies, and I mentioned, you know, things like descent rates,
5 breaking of the gear at various points.

6 Q Did you describe the terrain?

7 A I believe, but I am not sure whether I did this
8 or somebody else, but there were times in there that the
9 color photos that, you know, in fact your exhibit, the Court
10 trial exhibit, the color photos were used to show the
11 terrain and other certain information.

12 Q I asked you did you describe the terrain?

13 A In the discussions of the pictures, yes.

14 Q And you said it was smooth?

15 A I described the level terrain as shown in the
16 photographs.

17 Q Did you say it was level and smooth?

18 A I described it in terms of rice paddy type
19 farm land.

20 Q Did you say it was level and smooth, if you didn't,
21 say so?

22 MR. DUBUC: In those words, did he say it was
23 level or smooth?

1 BY MR. LEWIS:

2 Q Did you say it was level and did you say it
3 was smooth? I don't care if you said smooth or level or
4 level or smooth or if you used them in two different
5 sentences. Did you indicate those qualities or either one?
6

7 A I don't recall those exact words. I did
8 describe the rice paddy terrain.

9 Q Did you say it was smooth?

10 MR. DUBUC: He said he doesn't recall those
11 exact words. He has answered that. You don't want him
12 to describe what he said?

13 MR. LEWIS: I just want to know did you use
14 the word smooth?

15 THE WITNESS: I don't know whether I used that
16 word or not.

17 BY MR. LEWIS:

18 Q Did you use the word level?

19 A I don't really recall.

20 Q Now did you discuss G forces, the same calculations
21 and things like that that you have in this report?

22 A In outlining the sequence of events, I did
23 discuss the velocity of the aircraft at first impact, second
impact and off the top of my head, the distances involved

1 and that I had calculated the average decelerations and
2 therefore the average G forces.

3 Q Did you describe the maximum G forces at any
4 time?

5 A No, I didn't describe the maximum G forces.

6 Q In other words, did you say that the maximum
7 G force was such and such, any particular figure?

8 A I don't believe so. I do recall some questions
9 what could they have been and et cetera.

10 Q What did you say?

11 A What?

12 Q What did you say?

13 A I guess I would have said that gee, I don't
14 really believe I have ever tried to analyze from what the
15 maximum would be.

16 Q So then the only answer you gave with respect
17 to or discussion that you had with respect to G forces in
18 which you made any report on your analysis of the G forces
19 was in terms of average G forces, is that correct?

20 A As I recall, that is all I could have talked
21 about, the 1.6 in one case and 1.4, 1.4 something in the
22 other case.

23 Q So whenever G forces are mentioned in D-1298,

1 you are not referring to maximum G forces, is that correct?

2 MR. DUBUC: I object to that.

3 THE WITNESS: That is a different question.

4 BY MR. LEWIS:

5 Q Are you referring to maximum G forces in this
6 report?

7 A In that report, there is a section in that
8 report that goes back and analyzes some test data, documented
9 by John Paul Stepp involving rocket sled tests, many, many
10 rocket sled tests in which they actually recorded the G
11 forces as a function of the time and the reports speak for
12 itself in that area and it does relate that John Paul Stepp
13 report back to the base line of the average that I had
14 discussed in this meeting.

15 Q But you haven't calculated it?

16 A And it predicts that if the variation in
17 momentary G forces over all of those many rocket sled tests
18 would be analogous or indicative of the variations of the
19 G forces on the C5-A during that crash sequence, then the
20 plateau and/or the peak would vary by so much of above and
21 below that average and that is all in that exhibit.

22 Q Did you calculate yourself the maximum G forces
23 at different points in time of the descent of this airplane?

1 MR. DUBUC: Before landing?

2 MR. LEWIS: At any time, including after
3 landing. I will subdivide it if he wants.

4 MR. DUBUC: Your question means?

5 MR. LEWIS: It speaks for itself.

6 MR. DUBUC: It may not because the report, if
7 you are referring to the report --

8 MR. LEWIS: I am referring to anything, regard-
9 less of the report.

10 Did you ever calculate a maximum G force?

11 MR. DUBUC: During descent?

12 MR. LEWIS: During descent of this airplane
13 from the time of explosive decompression until the time the
14 last piece stopped?

15 MR. DUBUC: You're asking him whether he has
16 got that information?

17 MR. LEWIS: If he ever calculated it.

18 MR. DUBUC: We know we have an exhibit which
19 shows G forces in flight.

20 MR. LEWIS: I am asking him.

21 MR. DUBUC: Which is not this report.

22 MR. LEWIS: I am asking if he calculated it.
23 Did you ever calculate it?

1 THE WITNESS: In regard to the first impact
2 point, I did some calculations and then I had some people
3 do some calculations for me and then using this in conjunc-
4 tion with the testimony of the pilot about the rate of
5 descent, et cetera, I made a calculation as to what the G
6 forces would not have exceeded.

7 Now that is a little different than saying I
8 calculated how high the G force was. You know, if you
9 have a certain rate of descent of an aircraft, if it really
10 goes on and touches the ground at that rate of descent,
11 then you can calculate that G force.

12 BY MR. LEWIS:

13 Q How much did the airplane weigh immediately
14 prior to the first impact before it hit the ground?

15 A You're asking me to do quite a task from
16 memory.

17 Q Did you ever calculate that?

18 A That is a matter of the actual record.

19 Q Did you ever establish that?

20 A Some members of the, you know, the technical
21 team serving the Accident Board did calculate it at some
22 point in time. What the landing of the aircraft would have
23 been under these conditions. I didn't personally do it, no.

1 Q Did you refer to that when you referred to
2 D-1298?

3 A I had prior knowledge of that, yes.

4 Q You had it in your mind or had a document with
5 you when you wrote it?

6 A I had several documents.

7 Q I am talking about the weight of the airplane.
8 Did you have, when you wrote the exhibit D-1298, did you
9 have at your hand or had you referred to the weight of the
10 airplane at impact?

11 A Well, I either had the document available or
12 I had knowledge of what the document said. I don't know
13 whether I immediately had it in front of me.

14 Q You're saying you looked at it at that time?

15 A I had knowledge of it, yes.

16 Q What is it?

17 A It was the weight and balance sheet for the
18 aircraft.

19 Q Do you have that with you?

20 A No, I don't have it with me. As I recall,
21 it's part of the Accident Report.

22 MR. DUBUC: It's also in the exhibits in the
23 liability.

1 MR. LEWIS: It may be but we asked him to bring
2 with him all of the materials that he used.

3 MR. DUBUC: I hope we agreed yesterday that we
4 don't bring every bit of testimony from way back in trials
5 because you have got all of that.

6 MR. LEWIS: We certainly didn't agree that he
7 didn't have to bring what the subpoena called for. We're
8 taking oral depositions and I wanted the facts and the
9 data that he used to make this report and particularly the
10 documents that he referred to.

11 MR. DUBUC: Well, I will state on the record
12 that I think it is unreasonable for us to bring boxes of
13 and bags of prior testimony or exhibits already marked and
14 identified in these proceedings several times by Mr.
15 Edwards over seven or eight days of prior deposition
16 testimony and at least four or five days of trial testimony
17 which have already been covered. That is an old document.

18 MR. LEWIS: It may be, but this is a new report
19 and I think I have a right to see the documents that he
20 used when he prepared the report and we asked for them and
21 you didn't bring them.

22 MR. DUBUC: We will get it.

23 MR. LEWIS: It doesn't do me much good since I

1 have struck the question on him.

2 MR. DUBUC: If you want someone to bring that
3 over from my office, I can do it or I have a better
4 suggestion, since you have it in your office, we just get
5 the number and Mr. Fricker or somebody can pull it out of
6 your file.

7 MR. LEWIS: I just wanted to see what pieces of
8 paper he used.

9 MR. DUBUC: He said the weight and balance
10 sheet previously marked and you have that in your files.

11 MR. LEWIS: I know that.

12 MR. DUBUC: You're telling me you expected me
13 to bring that today even though you got it?

14 MR. LEWIS: Yes.

15 MR. DUBUC: I think that is unreasonable.

16 MR. LEWIS: Well, we will have to let the
17 Court decide that.

18 MR. DUBUC: I can't anticipate everything you
19 want.

20 MR. LEWIS: Well, there are millions of documents
21 in this case and I want the ones he used. I can't surmise
22 in advance what he uses.

23 MR. DUBUC: He could use the weight and balance

1 sheet, the accident report, Exhibit D-3 which has the weight
2 in it.

3 MR. LEWIS: I understand that.

4 MR. DUBUC: You have that, that is an exhibit.

5 MR. LEWIS: We know in many instances of things
6 that he didn't check and I suspect that is one of the
7 things.

8 MR. DUBUC: We only know that he checked things
9 that he doesn't consider relevant and I am not so sure
10 what the weight of the airplane is with the G forces on the
11 occupants, I don't think that is important.

12 MR. LEWIS: It may not be.

13 MR. DUBUC: Why ask him that.

14 MR. LEWIS: I don't want your version, I will
15 decide whether I think it is relevant or not.

16 BY MR. LEWIS:

17 Q How fast was the airplane proceeding when it
18 hit the ground for the first time, speed in miles per hour,
19 statute miles per hour?

20 A The recorded data from the MADAR was 310 miles
21 per hour, 3.6 seconds prior to that first impact that we
22 had gone over many times, that the records after that 3.6
23 seconds up to the point of impact were washed out.

1 Q When the MADAR broke?

2 A The MADAR didn't break, per se. It was some
3 sort of an electrical transient, that momentary transient
4 that caused the stored data, which is in process of being
5 recorded, to be erased and that is a normal function of the
6 system. When the system gets this kind of a signal.

7 Q What is an electrical transient, a malfunction?

8 A Well a disturbance on the electrical line, it
9 could be high voltage, it could be a low voltage.

10 Q A malfunction of the equipment though?

11 A It was not necessarily a malfunction of the
12 MADAR system.

13 Q A malfunction of some part of the airplane,
14 wasn't it?

15 A A disturbance on the electrical signal line.

16 Q Was it a malfunction of some part of the airplane?

17 MR. DUBUC: Do you know, he testified to this
18 already and in two trials already.

19 MR. LEWIS: I thought -- he doesn't seem to
20 want to answer. I think he's testified before that it was
21 a malfunction of the airplane.

22 MR. DUBUC: All right, go ahead.

23 BY MR. LEWIS:

1 Q Would you answer?

2 A It was something happened somewhere on the air-
3 craft at this touchdown that gave a disturbance on some
4 line somewhere in the aircraft that told the MADAR that it
5 was time to dump that memory.

6 Q Was it a malfunction?

7 A It was some fault somewhere in the electrical
8 system, not necessarily the MADAR system.

9 Q That was a malfunction of some part of the
10 airplane, wasn't it?

11 A It was a fault probably related to the touchdown
12 and under these conditions --

13 Q How many Gs is the airplane designed to with-
14 stand before the electrical system malfunctions?

15 A I don't know that there is a specific criteria
16 on the electrical system, per se, in regards to Gs.

17 Q Is there a specific -- is there a requirement
18 as to what the amount of Gs the airplane as a unit is
19 designed to withstand before the malfunction in striking
20 the ground?

21 A The aircraft, I believe, is designed for two and
22 a half Gs and after that, well you're expected to have some
23 structural problems exist as a result of this load.

1 Q All right. So the airplane is designed to be
2 able to hit the ground for two and a half Gs without
3 malfunctioning, correct?

4 A Without breaking. Shortly thereafter, you know,
5 one little bit over that and you're going to break something.

6 Q Something would break?

7 A Somewhere.

8 Q Now, but the airplane specs require the airplane
9 to be able to sustain two and a half Gs when it hits the
10 ground without any part breaking, including the electrical
11 system, isn't that so?

12 A That is fault in the electrical system?

13 Q Would you answer the question, please, then you
14 can explain any way you want.

15 MR. DUBUC: He's trying to answer the question
16 if you will let him.

17 THE WITNESS: What is the question?

18 MR. LEWIS: Read it back.

19 THE WITNESS: That is true, but what I started
20 to explain is, I don't believe two and a half G criteria is
21 laid on the electrical system.

22 BY MR. LEWIS:

23 Q Well, then, can the airplane --

1 A I started to explain that this problem that
2 happened somewhere on the electrical system, that resulted
3 in the transient, it could very well have been and probably
4 was a wire breaking and shorting to the structure as a
5 function of this gear breaking off at first impact and it
6 really was related to G loads, per se.

7 Q Is there a G meter on the airplane, some meter
8 that was designed to measure G loading?

9 A Yes, there are at least two.

10 Q And are they designed so that they will function
11 independently in the event of a severe impact?

12 A There is one G sensor recorded on the MADAR
13 data tape and of course that data was dumped out of the
14 storage along with the other data.

15 Q That didn't work, in other words?

16 A I didn't say it exactly like that, Mr. Lewis.
17 I stated that that data would have been dumped out of the
18 storage facility along with all of the other data. The
19 second sensor is a little mechanical type device that is
20 mounted on the main instrument panel in front of the
21 pilot and co-pilot and its function is to just indicate
22 the maximum Gs during that flight.

23 Q How far does the dial go up, what is the

1 maximum positive Gs?

2 A I don't recall.

3 Q Can you give me any order of how high it goes?

4 A I can't right off the top of my head.

5 Q Is it over two and a half?

6 A I am sure it's over two and a half.

7 Q Is it over three?

8 MR. DUBUC: The instrument?

9 MR. LEWIS: The scale on the instrument.

10 MR. DUBUC: What the instrument will record?

11 MR. LEWIS: It doesn't record, it just indicates
12 as I understand the witness. Does it record?

13 THE WITNESS: No, sir, it's a mechanical device.

14 BY MR. LEWIS:

15 Q Just an indicator?

16 A I really don't know.

17 Q Can you tell me how many negative Gs it will
18 indicate?

19 A The same answer, I don't really know.

20 Q In the design specifications for the airplane,
21 were there various G loadings that the airplane was
22 supposed to be able to sustain?

23 MR. DUBUC: The whole airplane?

1 MR. LEWIS: Yes.

2 MR. DUBUC: He told you that.

3 BY MR. LEWIS:

4 Q Is that two and a half?

5 A I think it's expressed in other terms, in other
6 ways of defining the load on the aircraft for most of the
7 areas. In other words, it's designed in terms of sink rate
8 versus gross rate, et cetera, rather than Gs, per se, although
9 you could take a certain gross weight and a certain sink
10 rate and get Gs out of that.

11 Q So over two and a half Gs, you would expect the
12 airplane to start to break up, is that correct?

13 A It's not required to hold together beyond that.

14 Q You would expect it to break up over two and a
15 half Gs, is that correct?

16 A You could expect it.

17 Q Pardon?

18 A You could expect it to start breaking up.

19 Q Structurally?

20 A Yes.

21 Q Now when you went to Vietnam, Mr. Edwards, did
22 you make any measurements of the parts or any parts of the
23 structure that was left after the crash when and was existing

1 when you got there?

2 A I personally did not make any measurements.

3 Q Did the structural engineer that was provided
4 by Lockheed as part of the Lockheed team make any measure-
5 ments?

6 A Not to my knowledge.

7 Q In other words, I have seen a number of photo-
8 graphs of various parts that I will be glad to show them
9 to you again, if you will. I am talking about big structures
10 or different things, some were small, and I just wanted to
11 see whether, how much deformation there was and things of
12 an engineering nature. So that you could tell what the
13 deformation was of a stringer or of another structural
14 member. Did you make any calculations or measurements of
15 those in the field?

16 MR. DUBUC: Personally or the team?

17 MR. LEWIS: Yes, anybody for Lockheed.

18 THE WITNESS: Anybody for Lockheed. There
19 were some things that were measured by, and I am not sure
20 whether one of the Lockheed people did this or somebody
21 else. They measured lengths of control cable as attached
22 to the certain parts of the wreckage and the other length
23 attached to another piece.

1 BY MR. LEWIS:

2 Q Anything else?

3 A I don't recall any other measurements being
4 made in the field.

5 Q What I am trying to find out is did you or
6 the structural engineer that was with you or any member of
7 the Lockheed team measure the deformation, for example, of
8 any structural member of the airplane, of the wreckage, I
9 am speaking of?

10 A To my knowledge, no Lockheed person measured
11 any deformation in the field, if that is your question,
12 in the field.

13 Q Were any measurements of structural members
14 performed after you left the field?

15 A Oh, yes, as these parts, relevant parts, in
16 other words, the part had to have some relevancy of what
17 we were trying to do before we could go into that kind of
18 detail and especially these parts were relevant enough
19 to eventually go into laboratory analysis. Yes, all kinds
20 of things were done to those.

21 Q Were any structural -- were any members brought
22 back, and I will start with the different facts, were any
23 stringers brought back?

1 A Pieces of the floor structure were brought back,
2 pieces of torc deck were brought back, what we call the
3 2100 bulkhead, the upper beam was brought back.

4 Q Anything else?

5 A Tubings, hydraulic tubing, every piece of the
6 ramp lock structure that we could locate was brought back.

7 Q Any stringers or beams or what is the word,
8 longerons, any of those brought back?

9 A Beams, skins, stringers, et cetera, associated
10 with the ramp and with the pressure doors, everything that
11 was found was brought back.

12 Q How about parts adjacent to the places where
13 you say the airplane separated into pieces? For example,
14 the aft separation near the empennage, any part of that
15 brought back or measured by you or Lockheed people or anybody
16 else?

17 A I don't recall any that were brought back
18 because it was not relevant to the cause of the accident.

19 Q Were any parts, any structural parts adjacent
20 to the separation, either before the wing or aft of the wing,
21 you know what location, the ones I asked you to draw on
22 that diagram, any of those parts, either measured in the
23 field or brought back and measured in the United States by

1 anyone, to your knowledge?

2 A I don't recall that they were brought back by
3 anyone. I have no knowledge of it.

4 Q You didn't measure any of those in the field?

5 A I did not.

6 Q Or make any tests in the field, right?

7 A No, I didn't make any tests, there wasn't a
8 great deal of either time or facilities to do any testing.

9 Q You didn't suggest any of those be brought back,
10 did you?

11 A There was no capability to bring it back. We
12 were working in a war zone and you do the best you could.

13 Q Did you ask anybody to bring it back for you?

14 A To bring it back?

15 Q Any structural members adjacent to the places
16 where the airplane broke apart?

17 A I didn't.

18 Q Did you ask the Air Force, as head of the
19 Lockheed team, that you in the Technical Assistant to the
20 Board, did you ask the Air Force or any other part of the
21 government to bring back any particular piece of structural
22 member that was adjacent to the places where the airplane
23 broke apart?

1 A Every member of that technical team recognized
2 this was a war zone. Every member of the team recognized
3 we had very limited facilities for bringing anything out.
4 Therefore, any request that we made was predicated on that
5 knowledge. Recognizing that, the answer is that no Lockheed
6 member, to my knowledge, suggested bringing out anything
7 other than those things relevant to the cause of the
8 accident. And that involved things around the ramp.

9 Q But you didn't ask that?

10 A I didn't ask because I knew there was no point
11 in asking such a ridiculous question.

12 Q Tell me what was, in addition to the babies and
13 adults on the plane, what was the cargo of that airplane?

14 MR. DUBUC: Going out of Vietnam?

15 BY MR. LEWIS:

16 Q Yes, when it left, I am talking about airplane
17 number 218, when it left, before the ill-fated crash.

18 MR. DUBUC: From Vietnam.

19 MR. LEWIS: Yes.

20 MR. DUBUC: We have the cargo in and out.

21 BY MR. LEWIS:

22 Q What was the cargo?

23 A I am not knowledgeable of any cargo going out

1 other than that baggage associated with the personnel on
2 Board. There may have been, I don't know, as I -- I don't
3 know if the question ever came up.

4 Q Was there any report to your knowledge of any
5 problems with the flight, with the airplane 218 on the
6 flight from the United States to Vietnam?

7 A There were some writeups on maintenance,
8 writeups on the aircraft. There was some maintenance work
9 done on the aircraft, as I recall. There was something
10 about a windshield heat or windshield change that was done
11 at Clark Air Base just prior to the aircraft going to
12 Saigon. But it's things like that which are normal routine
13 maintenance items.

14 Q Anything else?

15 A Well, while the aircraft was enroute to
16 eventually Saigon?

17 Q Problems with the door, the aft ramp, or the
18 door system?

19 A During this particular mission?

20 Q Yes.

21 A I believe your question was while enroute?

22 Q From the United States, yes.

23 A I am not aware of any discussion, I don't

1 recall any discussions of any problems with that aft door
2 system. In fact, as I recall, the aft door system was not
3 used during this mission from the time of the on-load of
4 cargo from Warner Robbins Air Force Base. It was not
5 opened.

6 Q But there were -- were there any warning lights
7 indicating problems with it or anything like that, to your
8 knowledge?

9 A None were ever brought to my attention during
10 this investigation.

11 Q Did this plane have a history of problems with
12 that particular door, this airplane?

13 MR. DUBUC: Are we going into --

14 MR. LEWIS: Just very briefly --

15 MR. DUBUC: I think you covered all that several
16 times.

17 MR. LEWIS: I will withdraw the question.

18 BY MR. LEWIS:

19 Q Mr. Edwards, when was the first time, when did
20 it first come to your knowledge that C5-A wings had a
21 structural weakness and were not up to design specifica-
22 tions?

23 A When did it first come to my attention?

1 Q Yes.

2 MR. DUBUC: Are we going to go into the contract
3 specs on the wings, we went through all that. I don't think
4 it is relevant in view of the stipulation of September 18,
5 1980. If this relates to something else, fine.

6 MR. LEWIS: I understand that. The reason that
7 I want to know, and I don't mind telling you, is that this
8 gentleman made an analysis of what happened to the wings, as
9 well as the rest of the airplane, and why they came off,
10 when they came off, and as a part of the accident sequence,
11 and I think that I have a right to explore whether there
12 was a weakness in the wing system or the wing supports or
13 the wing structure itself. That might have made it behave
14 differently other than the way it did.

15 MR. DUBUC: Well, of course you know from that
16 liability stuff that the wing problem was a life problem,
17 not necessarily a structural problem.

18 MR. LEWIS: I am not -- that may be, and I
19 don't know that that is the case, but my information is
20 that it is not the case.

21 MR. DUBUC: Okay, but I am just telling you
22 he may have to explain all that and if you want him to,
23 fine.