

RAS 4418

# Official Transcript of Proceedings

## NUCLEAR REGULATORY COMMISSION

Title: Private Fuel Storage, LLC

Docket Number: 72-22-ISFSI; ASLBP No. 97-732-02-ISFSI

Location: Salt Lake City, Utah

Date: Saturday, April 13, 2002

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SECY-02

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION

In the Matter of: )  
 PRIVATE FUEL STORAGE, LLC, ) Docket No. 72-22  
 (Independent Spent Fuel ) ASLBP No.  
 Storage Installation) 97-732-02-ISFSI  
 )

U. S. Nuclear Regulatory Commission  
 Utah State Capitol  
 Salt Lake City, Utah 84114

On Saturday, April 13, 2002 at 9:00 a.m. the  
 above-entitled matter came on for hearing, pursuant to  
 notice, before:

MICHAEL C. FARRAR, CHAIRMAN  
 Administrative Judge  
 U. S. Nuclear Regulatory Commission

DR. JERRY R. KLINE  
 Administrative Judge  
 Atomic Safety & Licensing Board Panel

DR. PETER S. LAM  
 Administrative Judge  
 Atomic Safety & Licensing Board Panel

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## I N D E X

## E X A M I N A T I O N

Lt. Colonel Hugh Horstman  
Cross Examination by Mr. Gaukler Page 4276

## E X H I B I T S

No.		MRKD/ADMTD
	Applicant's Exhibits	
82	U.S. Air Force History, 1947-1998	4395
83	Excerpts from Declaration of Hugh Horstman, with markings made during his deposition	4410

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1 Saturday, April 13, 2002

9:00 a.m.

2

3

P R O C E E D I N G S

4

5

JUDGE FARRAR: It's 9:00, Saturday

6

morning. We left here less than 12 hours ago, so I

7

hope everyone is refreshed as can be.

8

We have some things we'd like to see all

9

counsel at the bench about off the record.

10

(A discussion was held off the record.)

11

JUDGE FARRAR: Back on the record. We

12

just had a little discussion with counsel about

13

some of the good but confusing things that happened

14

in the late hours last night, and we're prepared to

15

proceed.

16

MR. TURK: Your Honor, before we resume

17

witnesses, I'd like to make a statement on behalf

18

of the Staff. The Staff's witnesses consulted last

19

night as to whether they would be able to do the

20

kind of analysis they perceived the Board was

21

interested in, in observing if that was possible,

22

and they reached a determination that they could

23

not do that analysis without data concerning the

24

actual altitude at which the planes fly through

25

Skull Valley, the location within the valley, the

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1       airspeed and other factors for which data are not  
2       collected. And in order to do a proper weighting,  
3       they would have to have that information, which  
4       does not exist, so they've determined that they  
5       don't believe they're able to do that kind of  
6       calculation.

7                   JUDGE FARRAR: All right.

8                   (Judges conferred off the record.)

9                   JUDGE FARRAR: Mr. Turk, that's it?

10                  MR. TURK: Thank you.

11                  JUDGE FARRAR: Let me just say  
12       something, particularly for the State's benefit in  
13       response to that. This litigation is unlike  
14       ordinary litigation in that it doesn't focus on  
15       whose responsible for past event or what the  
16       consequences of a past event are. This is more of  
17       a moving target litigation. I think the Applicant  
18       is on its amendments to its license application up  
19       in at least the low twenties. And that's  
20       appropriate. On the other hand, the State comes in  
21       with new contentions and has to justify that they  
22       are late filed, and go through some hoops to be  
23       heard. Given that, Mr. Turk, if your witnesses  
24       decide -- which is entirely their decision -- to do  
25       anything that amends their testimony, I would

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1 expect that it would be accompanied by some showing  
2 of why that should be let in at this late date. If  
3 it's not accompanied by such a showing, Mr. Soper,  
4 you may file a three-line objection and demand such  
5 a showing or alternatives. Mr. Turk, if you do  
6 accompany with a showing, Mr. Soper we'll give you  
7 time to respond both -- at least initially on the  
8 question of why it ought to be considered at this  
9 late date and then, of course, we'll work out a way  
10 on the merits that the substance would be  
11 addressed.

12 MR. TURK: Thank you. And at this time,  
13 though, Your Honor, we don't anticipate putting  
14 anything forward beyond what's in our testimony.

15 JUDGE FARRAR: Okay. All right, then,  
16 Mr. Gaukler, I think you were cross-examining  
17 Colonel Horstman.

18 Before we do that, are we -- in having  
19 reread his testimony last night, are we going to be  
20 at this all day? And I ask only for purposes of  
21 the remaining witness, if he can expect to be on  
22 today or --

23 MR. GAUKLER: I expect to be through  
24 early afternoon, something like that. I don't know  
25 about redirect and questions of the Board or

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1 questions by the Staff.

2 JUDGE FARRAR: All right.

3 MR. GAUKLER: That is just my rough  
4 estimate.

5 JUDGE FARRAR: If we don't finish  
6 Dr. Resnikoff today, will we come back Monday and  
7 do him? When will we do him?

8 MR. SOPER: We're checking to see if  
9 he's available next week at all, Your Honor.

10 JUDGE FARRAR: Did I hear that he might  
11 be back later in the session?

12 MR. SOPER: He will be back in May.

13 JUDGE FARRAR: For?

14 MR. SOPER: For seismic contention.

15 JUDGE FARRAR: Fine, we could do it  
16 then. I was just afraid, you know, this was the  
17 last we'd see of him, he would disappear.

18 MR. SILBERG: Dr. Resnikoff has never  
19 disappeared.

20 JUDGE FARRAR: Mr. Silberg, you've been  
21 at this too long.

22 MR. SILBERG: Yes.

23 JUDGE FARRAR: Go ahead, Mr. Gaukler.

24

25

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1 CROSS EXAMINATION (Resumed)

2 BY MR. GAUKLER:

3 Q. Good morning, Lieutenant Horstman.

4 A. Good morning.

5 Q. You have a copy of your resume in front  
6 of you, which was the first exhibit?

7 A. Yes.

8 Q. You have a copy of your resume in front  
9 of you?

10 A. Yes.

11 Q. The resume shows that you're presently a  
12 pilot for Southwest Airlines?

13 A. Yes.

14 Q. And that you retired from the Air Force  
15 in approximately June 1999?

16 A. I left active duty in June of '99. I  
17 retired in August of '99.

18 Q. And your last position was Deputy  
19 Commander of the 388th Operations Group at Hill Air  
20 Force Base?

21 A. Yes, sir.

22 Q. And as a Deputy Commander, there was a  
23 Commander above you, I take it?

24 A. Yes.

25 Q. And who was that?

1 A. Colonel Stephen Bozart.

2 Q. And he was the Commander of the  
3 operations group?

4 A. Yes, sir.

5 Q. And above -- at least part of the time  
6 while you were there, Colonel Fly was the --  
7 above -- the head of the operations group, he was  
8 the Flight Wing Commander for the 388?

9 A. Yes, sir, that's correct.

10 Q. And you hold Colonel Fly in high  
11 professional regard; isn't that correct?

12 A. Yes, sir, I hold Colonel Fly in  
13 extremely high regard.

14 Q. And as a matter of fact, when we were  
15 talking in your deposition in December, you  
16 identified him as a known expert generally in F-16  
17 matters?

18 A. Absolutely, yes.

19 Q. Going on, prior to going to Hill Air  
20 Force Base, you were assigned in Germany at Spang  
21 Dahlem; is that correct?

22 A. Spang Dahlem Air Base Germany.

23 Q. And there --

24 MR. SILBERG: I think the reporter  
25 wanted that spelled.

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1 COL. HORSTMAN: S-P-A-N-G, D-A-H-L-E-M.  
2 Air Base Germany?

3 Q. (By Mr. Gaukler) And there you were a  
4 Deputy Commander for the 52nd Support Group?

5 A. Yes, sir, I held a variety of jobs in  
6 Spang Dahlem. I was there for approximately four  
7 years. I flew the F-16 continually for those four  
8 years, and as is normal with most field grade  
9 officers, they move you from position-to-position  
10 after a year or two, depending on what positions  
11 are open. So I held a variety of different  
12 positions, including the Deputy Commander of the  
13 Support Group, which essentially, in the time that  
14 I was there, the Support Group Commander was gone  
15 to Belgium, his wife had a liver transplant. So  
16 essentially for that time, I was what you all would  
17 consider the Base Commander.

18 Q. And you were involved with F-16s at that  
19 point in time?

20 A. Yes, sir, I was actively flying F-16s as  
21 an instructor pilot at that time.

22 Q. Now, prior to that, in June of '95 to  
23 June of '96, you were with the fighter wing in the  
24 same place in Germany?

25 A. Yes, sir. I held a wing staff position.

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1 Each wing has similar positions. The position is  
2 designed to prepare the wing for various readiness  
3 events, including evaluations from not only the  
4 U.S. but from NATO. In addition to all kinds of  
5 other evaluations, emergency response, a variety of  
6 things. Primarily, it was just associated with the  
7 F-16 operation.

8 Q. And prior to your experience in Germany,  
9 you were in the air combat command office in  
10 Langley?

11 A. Yes.

12 Q. So you had a desk job in the D.C. area  
13 for a couple of years?

14 A. Well, sort of, sir. It's two hours  
15 south of Washington D.C.. It's in a much nicer  
16 location, sorry.

17 MR. SILBERG: Strike that from the  
18 record.

19 COL. HORSTMAN: I held a series of staff  
20 jobs with respect to Air Force fighters for my  
21 entire duration there. One of the things that we  
22 did in my primary office that I was for the longest  
23 period of time, was we dealt with base realignment  
24 and closure and the corresponding fore structure  
25 moves. For example, if Moody Air Force Base F-16s,

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1 if that base was going to close, we would determine  
2 the best location to remove the remaining F-16s  
3 from that unit to a different physical location in  
4 the Air Force. We would study all types of issues;  
5 logistics, range supportability. But primarily, it  
6 was involved with where airplanes go, how to  
7 support the aircraft with respect to national  
8 defense.

9 Q. And prior to that, you were -- you flew  
10 the F-111?

11 A. Yes, sir, I flew the F-111 for a couple  
12 of assignments. The four years over in a base  
13 called Upper Heyford, H-E-Y-F-O-R-D in the United  
14 Kingdom. It's near Oxford. It's in Oxfordshire,  
15 the county of, and I flew that for four years, was  
16 an instructor pilot for over two years at that  
17 time.

18 Q. And F-111, that's -- what type of  
19 fighter aircraft?

20 A. It's a two-engine high speed fighter  
21 aircraft designed to penetrate enemy air defenses  
22 and deliver ordnance. We did not do any air-to-air  
23 combat. The F-111 is all designed for  
24 air-to-ground bombing.

25 Q. And unlike the F-16, it has two engines?

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1           A.       Correct. It has two engines and two  
2 crew members. It has a pilot and a weapon systems  
3 officer, they sit side-by-side like in an  
4 automobile.

5           Q.       And then for a point in time, according  
6 to your resume, from 1979 to 1983, you had a -- you  
7 were involved in a B-52?

8           A.       Yes, I was a B-52 navigator and  
9 instructor navigator stationed at two bases. One  
10 in the east coast, one in the Pacific Northwest.  
11 Essentially, it was doing the same mission as what  
12 General Jefferson did. I was a navigator, not a  
13 pilot, and my job was to make sure that we  
14 delivered ordnance accurately, that we were on  
15 time, on course, and I was essentially the  
16 navigator. The newer aircraft and fighter aircraft  
17 don't require that crew members due to  
18 sophistication and a variety of things.

19          Q.       Now, on your resume, you list  
20 approximately 2800 hours flying time of military  
21 aircraft; correct?

22          A.       Not including the training aircraft,  
23 yes.

24          Q.       Okay. And about a thousand hours on the  
25 B-52; correct?

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1 A. A little over, yes.

2 Q. And over a thousand hours on the F-111?

3 A. Yes, sir.

4 Q. And about 800 on the F-16?

5 A. Approximately, yes.

6 Q. Now, yesterday, when we quit, we were  
7 talking about the G-LOC accident, the accident you  
8 claimed was a G-LOC accident, PFS Exhibit 80, which  
9 is a May 25th, 1990 accident at Moody Air Force  
10 Base in Georgia; correct?

11 A. That's correct.

12 Q. And with respect to that accident, you  
13 claim that was G-LOC based upon a conversation that  
14 you had with a Four Star General, if I understood  
15 correctly?

16 A. That's correct.

17 Q. Isn't it true in terms of the accident  
18 investigation reports, that the accident  
19 investigation reports require a statement of  
20 opinion -- one purpose opinion is to require a  
21 statement of opinion and obtain information or  
22 legal review from the Staff Judge Advocate?

23 A. Yeah, I believe that's accurate, yes.

24 Q. And yesterday, you stated you did not  
25 rely upon the review of any confidential accident

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1 report in coming to the conclusion that this was a  
2 G-LOC accident?

3 A. That's correct, I relied upon a personal  
4 conversation that I had.

5 Q. What was the date of this conversation?

6 A. I don't recall exactly. It was right  
7 after the accident, the Board was briefed.

8 Q. And who was the air combat commander at  
9 the time?

10 A. At the time, he was the director of  
11 operations, General Mike Ryan.

12 Q. Why would he take time to talk to you  
13 verbally?

14 A. I worked for him for approximately two  
15 years. I was an executive officer to another  
16 general officer, we spent a lot of time together,  
17 and I was in his office when he walked out of the  
18 accident investigation board. His actual position  
19 at the time, and I think -- I'm not sure I stated  
20 this accurately, was the director of operations for  
21 air combat command.

22 Q. So he wasn't a Four Star General?

23 A. He became a Four Star General.

24 Q. Later?

25 A. He was a Two Star General at the time.

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1 Q. Two Star General at the time?

2 A. Major General.

3 Q. Major General.

4 How do you explain the response of the  
5 Staff Judge Advocate to a Freedom Information Act  
6 request that we showed you yesterday which is PFS  
7 Exhibit 81, where they did not identify that  
8 accident as a G-LOC accident?

9 A. I'm not sure what you're asking.

10 JUDGE FARRAR: Did not identify it,  
11 Mr. Gaukler, as a what?

12 MR. GAUKLER: G-LOC accident.

13 Q. (By Mr. Gaukler) That was PFS Exhibit  
14 80 that we handed out yesterday. It was a response  
15 that General Cole received from the Judge Advocate  
16 with respect to whether there are any accidents  
17 that occurred at Moody Air Force Base from -- for  
18 fiscal years 1990, '91 and '92 that involved G-LOC.  
19 And the response identified this May 25th, 1990  
20 accident; correct?

21 A. I'm not sure what the question is.

22 Q. Well --

23 A. I heard all that. I don't know what the  
24 question is.

25 Q. Do you have any explanation why the

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1 Judge Advocate in responding to a Freedom  
2 Information Act request, would say that this May  
3 25th, 1990 accident was not a G-LOC accident?

4 MR. SOPER: Well, I object to the form  
5 of the question. I don't see anything from the  
6 Judge Advocate in here. Am I looking at the  
7 same -- does that have reference to this particular  
8 document, Mr. Gaukler?

9 MR. GAUKLER: It specifically identifies  
10 three accidents that occurred. One, May 25th, 1990  
11 and it says that none of them involved G-LOC.

12 MR. SOPER: Well, the document I have  
13 seems to be signed by -- just to make sure we're  
14 talking about the same thing, the Chief of Safety  
15 and it was a review of safety reports. Are you  
16 referring to something from -- is he also a Judge  
17 Advocate?

18 MR. GAUKLER: I'm referring to that  
19 document which is the official Air Force response  
20 to a Freedom of Information Act request.

21 MR. SOPER: Maybe if you identified it  
22 as one signed by Greg Alston, he would know which  
23 document it is. Because I was confused.

24 MR. GAUKLER: Okay, fine. The one  
25 signed by Greg Alston, PFS Exhibit 81.

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1 JUDGE FARRAR: Wait. My Exhibit 81  
2 isn't signed by Greg Alston.

3 MR. GAUKLER: It's an E-mail from  
4 Cormier.

5 JUDGE FARRAR: Let's make sure Mr. Soper  
6 has that. He may have been looking at something  
7 else. This is one that Mr. Soper handed out in the  
8 wee hours last evening.

9 MR. SILBERG: Mr. Gaukler handed it out.

10 MR. GAUKLER: I handed it out, yeah.

11 JUDGE FARRAR: Do you have another copy?

12 MR. GAUKLER: Yeah, I have a copy.

13 JUDGE FARRAR: I want to make sure  
14 counsel has a copy.

15 MR. GAUKLER: I think I left my copy in  
16 my book. Can I go get it real quick?

17 JUDGE FARRAR: No, no, you stay here.

18 MR. GAUKLER: Okay.

19 JUDGE FARRAR: Where's the nearest copy  
20 machine? Thank you, General. The highest ranking  
21 support staff we ever had.

22 COL. HORSTMAN: Not quite, sir. He's a  
23 Brigadier General.

24 JUDGE FARRAR: Off the record.

25 (A discussion was held off the record.)

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1 Q. (By Mr. Gaukler) It's Exhibit 81 from  
2 Mr. Paul Cormier. That's C-O-R-M-I-E-R. Judge  
3 Advocate General, I believe, in response to a  
4 Freedom of Information Act request concerning  
5 whether a G-LOC accident occurred at Moody in  
6 fiscal years 1990, 1991 and 1992, and they identify  
7 three accidents in response that occurred at Moody  
8 during that time; correct?

9 A. Yes, it does.

10 Q. And it identifies in that response, the  
11 May 25th, 1990 accident; correct?

12 A. It does, yes.

13 Q. And it specifically says that none of  
14 the three accidents, which would include the May  
15 25th, 1990 accident, were G-LOC incidents; correct?

16 A. That's what the E-mail states.

17 Q. And do you have any explanation how the  
18 Judge Advocate office would tell us that this was  
19 not a G-LOC accident when you claim it was or when  
20 you claim you were told by the Two Star General  
21 that it was?

22 A. I'm not quite sure what you're asking.

23 Q. Do you have any explanation why the Air  
24 Force, the official Air Force response to us would  
25 say that this was not a G-LOC accident when you

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1 claim that it was a G-LOC accident? Doesn't it  
2 show that it was, in fact, not a G-LOC accident?

3 A. I'm still not quite -- you're asking me  
4 to explain --

5 Q. Do you have an explanation, put it that  
6 way, of your claim of this accident being a G-LOC  
7 accident, can be reconciled with the Judge  
8 Advocate's, the official response to a Freedom of  
9 Information Act request saying that no, this  
10 accident is not a G-LOC accident?

11 A. Based on the information that I have --  
12 and I've never seen this before, based on my  
13 personal conversation, I believe it was a G-LOC  
14 incident. I've never seen this before, so I can't  
15 offer an explanation.

16 Q. Now, you don't have any documents  
17 themselves to support the claim that this was a  
18 G-LOC accident; correct?

19 A. No, sir, as I previously stated, it was  
20 a personal conversation in his office, and that's  
21 what I recall.

22 Q. Now, you recall that during your  
23 deposition in July of 2000, we talked about this  
24 same issue, about a G-LOC accident that occurred at  
25 Moody Air Force Base?

1 A. Vaguely, yes.

2 Q. I'm going to hand out copies of the July  
3 deposition so -- basically I'll be referring to  
4 about four documents off and on today. One will be  
5 the December 11th deposition, December 11th, 2000,  
6 the other one will be the July 27, 2000, and I'll  
7 be referring to Colonel Horstman's declaration  
8 followed in opposition to the State's Motion for  
9 Summary Disposition and the aircraft report. So  
10 those will be the documents I'll be referring to  
11 off and on today. So if counsel will have those  
12 available, it would speed things up.

13 JUDGE FARRAR: Thank you, Mr. Gaukler,  
14 that's very helpful in terms of helping us follow  
15 things. Before you -- while these are being passed  
16 out and before you continue with your examination,  
17 do I understand correctly that the conversation  
18 with General Ryan --

19 COL. HORSTMAN: Yes, sir.

20 JUDGE FARRAR: Took place after your  
21 deposition?

22 COL. HORSTMAN: No, sir, before. It  
23 took place in 19 --

24 JUDGE FARRAR: Oh, that's right, you  
25 said it was right when he was coming out of

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1 the --

2 COL. HORSTMAN: Accident.

3 JUDGE FARRAR: Accident. Mr. Gaukler, I  
4 hate to interrupt you, but there's a question I'd  
5 like to ask that would help us follow this, I  
6 think.

7 It was unclear, Colonel Horstman, from  
8 what you said why this gentleman would talk to you?  
9 I can think of three reasons. One, he was an old  
10 fishin buddy and you, as a pilot, were curious;  
11 two, your official responsibilities at your --  
12 whatever you were doing then, related to this and  
13 you were looking for some information that might  
14 help you do your job better, or -- I forget what  
15 the third reason was. But you tell me, you know,  
16 why would this gentleman choose to talk to you  
17 about something whether or not it was your  
18 business?

19 COL. HORSTMAN: In the normal course of  
20 my responsibilities at combat command, I worked  
21 directly for a general officer and I was in contact  
22 with a number of general officers on a regular  
23 basis as his executive officer. So I was in their  
24 office on a routine basis, and I was in his office  
25 on a different matter when -- actually waiting for

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1           them in the outer office when they walked in from  
2           the accident investigation board. They being the  
3           general officer and his executive officer. And  
4           they were continuing the conversation and included  
5           me in the conversation about the accident.

6                         JUDGE FARRAR: And this would not be  
7           inappropriate? For example, yesterday, a reporter  
8           asked us a question, we said, you know, we're not  
9           allowed to answer that, that goes to --

10                        COL. HORSTMAN: It would have been  
11           inappropriate before the accident board conclusions  
12           were released, because it's still all privileged as  
13           they're trying to determine a cause. This happened  
14           afterwards. So they were then in the process of  
15           publishing the results, which as I stated, I didn't  
16           use, I used the personal conversation.

17                        JUDGE FARRAR: Okay. Then that  
18           clarifies it for -- of course, the parties are free  
19           now or later to pursue that further. Thank you,  
20           Colonel.

21                        Q.           (By Mr. Gaukler) You were saying that  
22           it's published -- the general could tell you  
23           because it was published, you would expect it to be  
24           published in the accident investigation report?

25                        A.           It was after the accident board had

1 briefed the headquarters, and after its brief, then  
2 they would publish it, so there's some kind of a  
3 time delay in there.

4 Q. My question is, you would expect it to  
5 be in the accident investigation report, wouldn't  
6 you, the conclusion?

7 A. I would assume so.

8 Q. And we just looked at the accident  
9 investigation report yesterday, and there was no  
10 reference to G-LOC, isn't that correct?

11 A. There's no reference to any cause of  
12 accident.

13 Q. Now, isn't it true that often accident  
14 reports will reference G-LOC if it's a cause, the  
15 public available accident reports?

16 A. Yes, sometimes, but not all the time.

17 Q. For example, I'm going to show you an  
18 accident report dated February 24 -- February 24,  
19 1994 accident that is one of the accidents in  
20 General Cole's, General Jefferson's and Colonel  
21 Fly's table that we looked at yesterday. And would  
22 you agree with me that that accident specifically  
23 refers to G-LOC?

24 A. The last paragraph, which is on page  
25 eight said, "For this reason and the witness

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1 statement in the report, I believe that Cadet  
2 Beneker experienced G-induced loss of  
3 consciousness, G-LOC during his vertical term and  
4 that he did not regain consciousness prior to  
5 impact."

6 Q. And isn't it true that for an accident  
7 report for the accident in Air Base Italy, again,  
8 one of the accidents in General Cole's, General  
9 Jefferson's and Colonel Fly's table which occurred  
10 on January 22nd, 1995, specifically refers to  
11 G-LOC?

12 A. It says here that it is likely due to  
13 incapacitation caused by G-induced loss of  
14 consciousness.

15 Q. Okay, thank you.

16 JUDGE FARRAR: Mr. Gaukler, do you have  
17 handy the exhibit numbers that those were both  
18 joint exhibits you have handy --

19 MR. GAUKLER: These were not made joint  
20 exhibits. They were a couple of the other accident  
21 reports that we didn't put in. I just was using it  
22 to get it on the record that many accident reports  
23 do show G-LOC as the cause.

24 JUDGE FARRAR: Thank you.

25 Q. (By Mr. Gaukler) Are you aware of any

1 other public -- public accident investigation  
2 reports that specifically refer to G-LOC?

3 A. I can go over a few.

4 Q. But do you see them in the public  
5 accident reports, references to G-LOC?

6 A. I have.

7 Q. Are you aware of any accidents caused by  
8 G-LOC that were not mentioned in the publicly  
9 available accident investigation report, other than  
10 this accident?

11 A. I'm trying to come up with a specific,  
12 and I can't come up with one. One of the  
13 difficulties with G-induced loss of consciousness  
14 is that a lot of times, you can't determine a cause  
15 of accident because the pilot flies the airplane  
16 into the ground and you don't have a statement from  
17 the pilot. And so I don't have a specific example  
18 of one off the top of my head.

19 Q. So the answer is, you don't know one as  
20 you sit here today, where that's the case?

21 MR. SOPER: You mean other than the one  
22 you talked about?

23 MR. GAUKLER: Other than the one he  
24 talked about which he claims is a G-LOC, yes.

25 Q. (By Mr. Gaukler) Is the answer to my

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1 question no? Other than the one you talked about,  
2 you know of no other accidents in which that was  
3 caused by G-LOC where it was not publicly stated in  
4 the accident investigation report that it was a  
5 G-LOC accident?

6 A. Off the top of my head, I cannot think  
7 of one.

8 Q. Now, let's go onto the deposition.  
9 Would you turn to pages 55 and 56, you talk about  
10 G-induced loss of consciousness; correct?

11 A. On page 54?

12 Q. Uh-huh.

13 A. We're not discussing G-induced loss of  
14 consciousness.

15 Q. 55.

16 A. I'm sorry.

17 Q. 55, we're talking about G-induced loss  
18 of consciousness. Let me refer you to page 53.  
19 That's the specific one I want you to look at. And  
20 you say on page 53 and page 52, you claim at the  
21 bottom of page 52, you claim because -- I asked you  
22 why is it your opinion that PFS incorrectly  
23 excluded such accidents, referring to G-LOC  
24 accidents from the Skull Valley type events. And  
25 you say because --

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1 A. I'm sorry, I'm lost.

2 Q. The bottom of page 52.

3 JUDGE FARRAR: Colonel Horstman, this is  
4 the supplemental deposition, not the one that was  
5 just handed out, not the original deposition.

6 Q. (By Mr. Gaukler) It should be to the --  
7 go to the front page and see if you have the one  
8 dated July 27, 2000.

9 A. I do. I'm just trying to find out where  
10 you are.

11 Q. I'm on the bottom of page 52.

12 A. Okay, thank you. Go ahead.

13 Q. There I ask you, "Why is it your opinion  
14 that PFS incorrectly excluded such accidents --  
15 referring to G-LOC accidents -- from the Skull  
16 Valley type events?" And then you go on to make  
17 the claim that you do in your testimony here, that  
18 the G-LOC accident can occur in a warm-up exercise;  
19 correct?

20 A. Correct.

21 Q. And then I go to the next page and I ask  
22 you, what particular -- can you give me an example,  
23 a particular example, and on page 53, you say, "I'm  
24 not finding it. But the accident I'm referring to  
25 was a Moody F-16." And then you go on to give a

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1 little bit further explanation with respect to the  
2 accident that you claim was a G-LOC accident;  
3 correct?

4 A. Yes, correct.

5 Q. And then you will recall later in the  
6 deposition, we walked through -- you had identified  
7 12 accident reports in which you took issue with  
8 PFS's classification of the accident report,  
9 approximately 12?

10 A. I recall that, yes.

11 Q. And we marched through each one of those  
12 accident reports, correct?

13 A. Yes, we certainly did.

14 Q. We got the copy of the accident report,  
15 looked at it, and I asked your basis for your  
16 disagreement with PFS's evaluation of that accident  
17 report; correct?

18 A. That's correct, yes, sir.

19 Q. And the May 25th, 1990 accident was one  
20 of those accidents; correct? If you would go to --

21 A. I don't recall specifically.

22 Q. If you look at -- first of all, look at  
23 Paragraph 44 of your declaration that -- 43 of your  
24 declaration. Now, this is the declaration that you  
25 filed in support of the state's response to PFS's

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1 Motion for Summary Disposition for Utah K. If you  
2 look on Paragraph 43, page 13.

3 A. I'm lost again, I'm sorry. Question and  
4 answer 43?

5 Q. Oh, no, you're looking at your  
6 testimony. I'm referring to your declaration. I  
7 have an extra copy right here.

8 A. I probably have it, just point me  
9 towards it.

10 Q. Here's an extra one.

11 A. Yeah. Which page, please?

12 Q. 43.

13 A. Okay.

14 Q. You say there -- Paragraph 43, excuse  
15 me, of your declaration. "I disagree with PFS's  
16 assessment that the May 25th, 1990 accident is  
17 likely to occur in Skull Valley -- unlikely to  
18 occur in Skull Valley." And you go on to state the  
19 basis of your disagreement with the May 25th, 1990  
20 accident; correct?

21 A. That's correct.

22 Q. And you don't identify G-LOC as being  
23 the cause of the accident in stating your  
24 disagreement with that accident; correct?

25 A. That's correct also.

1 Q. Now, at the deposition, if you look  
2 at -- I'm sorry, I lost my place for a second.  
3 Page 73 of your deposition of July 27, 2001  
4 deposition.

5 A. Okay.

6 Q. There I specifically asked you about the  
7 basis for your disagreement with the May 25th, 1990  
8 accident discussed in Paragraph 43 of your  
9 declaration, looking at the bottom of page 72,  
10 going to the top of page 73 of the deposition; is  
11 that correct?

12 A. Yes.

13 Q. And then I say, well, I have the  
14 accident report available, I'll be glad to make  
15 that available to you. And I made it available for  
16 you to look at; correct?

17 A. That's correct.

18 Q. And --

19 MR. SOPER: Where are we referring to,  
20 Mr. Gaukler?

21 MR. GAUKLER: Page 73.

22 MR. SOPER: Of the supplemental  
23 deposition?

24 MR. GAUKLER: Yes.

25 MR. SOPER: Thank you.

1 Q. (By Mr. Gaukler) And then we -- again  
2 in your response, you did not identify G-LOC as one  
3 of the bases --

4 MR. SOPER: Well, I object here. Your  
5 response to what? What question?

6 MR. GAUKLER: He did not identify in  
7 discussing the basis for his reasons why he  
8 disagreed with PFS's explanation of the May 25th,  
9 1990 accident G-LOC as being one of the reasons --

10 MR. SOPER: I object to the form of the  
11 question. He wasn't asked whether or not it was  
12 based on G-LOC. He was asked if he disagreed with  
13 the characterization. You're claiming his answer  
14 to stand for something else. I think you need to  
15 read the question exactly and give his answer  
16 exactly and tell us if there's something  
17 inconsistent, because I don't think you're doing  
18 that.

19 MR. GAUKLER: I asked him for the basis  
20 of his disagreement with respect to that accident  
21 and specifically, if you look on question 73 --  
22 page 73, question at line six --

23 JUDGE FARRAR: Mr. Gaukler, why don't  
24 you read that question and answer and then ask the  
25 question based on that.

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1           Q.       (By Mr. Gaukler) I was referring him to  
2 a summary of the accident that appeared in General  
3 Cole's, General Jefferson's and Colonel Fly's  
4 report, and I said, could you read the description  
5 that appears on page 18 and that was page 18 of Tab  
6 H, under the bold accident occurring on May 25th,  
7 1990 and tell me in what respects do you disagree  
8 with it. And then at line 15, I referenced the  
9 accident report saying I have it here, if it will  
10 be helpful for you to look at and you say, yes, it  
11 would be helpful. And then you say on line 19,  
12 "Okay, what do I disagree with?" And then you go  
13 into your explanation of what you disagree with  
14 respect to PFS's evaluation of that accident;  
15 correct?

16           A.       That's correct.

17           Q.       And you say, To begin with -- "To begin,  
18 we agree with the thousand for an issue, Thus it  
19 would be inconsistent with normal entry procedures  
20 for entering Skull Valley to be making a descending  
21 turn to a low level flight route while transiting  
22 the region near the PFSF. That's all." Okay.  
23 "Excuse me. Okay, the sentence after the paren,  
24 thus it would be inconsistent with normal entry  
25 procedures."

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1 MR. SOPER: Just a minute. Where have  
2 you jumped to? I don't know where you are.

3 MR. GAUKLER: I'm just going on to page  
4 74.

5 Q. (By Mr. Gaukler) "Excuse me", I say.  
6 Then he says, "Okay. The sentence after the paren,  
7 thus, it would be inconsistent with normal entry  
8 procedures for entering Skull Valley to be making a  
9 descending turn to a low level flight route while  
10 transiting the region near the PFSF. I disagree  
11 with that."

12 MR. SOPER: What do these questions have  
13 to do with G-LOC? You don't ask him anything about  
14 G-LOC.

15 MR. GAUKLER: I asked him what basis he  
16 disagrees with PFS's analysis, and he did not  
17 mention G-LOC in response to those questions.

18 MR. SOPER: That wasn't the basis he  
19 disagreed.

20 MR. GAUKLER: Is that the basis of his  
21 disagreement now?

22 MR. SOPER: Mr. Gaukler characterizes  
23 his question, characterizes the answer, and then  
24 claims it stands for something that wasn't even  
25 asked. This is improper cross-examination.

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1 JUDGE FARRAR: Mr. Soper, whether or not  
2 I agree with your characterization of Mr. Gaukler's  
3 characterization, let's try to get at this more  
4 directly. And, Mr. Soper, you have a point here,  
5 which is if I ask -- depending on the context, when  
6 I ask the witness what he disagrees with, he may  
7 say X, whereas if I ask him in some other context,  
8 he may say he disagrees with Z. I think that's the  
9 thrust of your point.

10 So, Mr. Gaukler, what we need to do is  
11 make sure we understand the context of the question  
12 and then give the witness a chance to explain his  
13 answer. Our problem here is not one of your  
14 making, but we're dealing with four different  
15 documents here where Colonel Horstman has testified  
16 at two or three or four, however many, where he's  
17 testified different times and the context of each  
18 one may have been different. And while we  
19 certainly are interested in any inconsistencies  
20 between testimony then and testimony now, we need  
21 to -- before coming to the conclusion that there's  
22 an inconsistency, we have to make sure that we've  
23 described the situation properly.

24 Q. (By Mr. Gaukler) If you look -- do you  
25 have the air crash report which is the PFS August

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1 2000 report, August 10, 2000? Do you have a copy  
2 of that there?

3 A. Let me look. I don't believe I have  
4 that, sir.

5 MR. GAUKLER: May I approach the  
6 witness, Your Honor?

7 JUDGE FARRAR: (Nodding affirmatively.)

8 Mr. Gaukler, while you're doing that,  
9 let's take a little break. The housekeeping staff  
10 last night caused us even more of a burden than I  
11 thought, and we're having trouble putting our hands  
12 on things that we had in front of us last night.  
13 Let's all take a little break, kind of in place.

14 MR. SILBERG: Off the record?

15 JUDGE FARRAR: Off the record.

16 (A recess was taken.)

17 JUDGE FARRAR: Back on the record. We  
18 think we've solved all our housekeeping matters, so  
19 Mr. Gaukler, please resume.

20 Q. (By Mr. Gaukler) Lt. Colonel Horstman,  
21 at pages 73 and 74 of your deposition, the July 27,  
22 2001 deposition, we were discussing PFS's  
23 conclusions or determinations of General Cole,  
24 General Jefferson and Colonel Fly, with respect to  
25 the May 25th, 1990 accident, which appear on page

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1 18 of Tab H to the aircraft crash report, which is  
2 Exhibit 10, PFS Exhibit 10; would that be correct?

3 A. Yes. I mean I think the exhibits are  
4 right.

5 Q. I know you particularly don't know the  
6 exhibits, but... And there if you look at that  
7 summary, where it says accident occurring on May  
8 25th, 1990 and the second sentence of that summary,  
9 it says, "The pilot lost situational awareness and  
10 crashed near the descend point at the aircraft, as  
11 the aircraft was making a descending turn to start  
12 the planned low level flight." And so therefore  
13 there, PFS -- General Cole, General Jefferson  
14 stated their cause -- their determination of the  
15 cause of the accident; correct?

16 A. Yes, sir, and I'd like to expand on  
17 that. I've read again the accident report that is  
18 one of the exhibits and it says nowhere in here the  
19 pilot lost situation awareness.

20 Q. You're referring to the May 25th, 1990  
21 accident report; correct?

22 A. The sentence you just read said the  
23 pilot lost situational awareness, et cetera, et  
24 cetera. I refer back to the accident report for  
25 the same accident, and as I study this, I see

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1 nowhere in here where it says the pilot lost  
2 situation awareness.

3 Q. But at the deposition, I asked you to  
4 describe to me in what respects you disagreed with  
5 General Cole, General Jefferson's and Colonel Fly's  
6 determination with respect to that accident;  
7 correct?

8 A. No, I believe we were talking about  
9 which category in your database it should go in,  
10 not about the cause of the accident.

11 Q. Will you go back and look at the  
12 question on page 73.

13 A. Okay.

14 Q. And I asked you under question six, with  
15 respect to this summary that we're just looking at  
16 here, "Under the bold, accident occurring on May  
17 25th, 1990, and tell me in what respect you  
18 disagree with it." I didn't limit it to any  
19 particular thing, did I, my question?

20 A. No, but to my recollection, the  
21 conversation has -- we were discussing the  
22 agreement or the disagreement for which category of  
23 those -- I believe it was 12 accidents, whether it  
24 was a Sevier B, yes or no, whether it was an  
25 engine, yes or no, and that was the basis of the

1 conversation.

2 Q. Now, in fact, you did not disagree with  
3 the categories that PFS determined for this  
4 accident in terms of the categories that we've  
5 discussed, did you?

6 A. Well, now I have to go back and look  
7 again.

8 Q. Would you take a look at --

9 A. Hang on, hang on.

10 Q. I'm going to try to help you, okay.

11 A. I've got a real easy cross-reference.  
12 It will make it quicker.

13 Q. Okay.

14 A. We did not disagree with any of the  
15 categories.

16 Q. Now, beyond that, earlier in the  
17 deposition, if you look back at pages 57 and 58 of  
18 your deposition.

19 A. This is the summer of 2001?

20 Q. Yes, uh-huh. And there we're talking  
21 about -- we were just talking about this claim that  
22 there was a G-LOC accident at Moody's that had  
23 happened, okay. And the bottom of page 57 and the  
24 top of 58.

25 A. Yeah, I'm reading that. What's the

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1 question?

2 Q. And there I asked you specific with the  
3 G-LOC, "Any explanation why this one instance that  
4 you cited, the Moody Air Force pilot lost  
5 consciousness? Do you have any explanation why he  
6 lost consciousness?" And then the answer is, "The  
7 accident report said that he had just lost  
8 consciousness. Why that happens, I mean it's  
9 psychological. I can't speak to that specifically  
10 why, but he was under this kind of G environment. "  
11 And then I asked you, "And this accident was one of  
12 the accident reports you reviewed that PFS had  
13 supplied to you?" And you say, "To be honest, I'm  
14 don't know for sure." And then I just asked, well,  
15 we'll be going through the accident reports that  
16 you disagree with, will you please tell me if any  
17 of them are the Moody accident report that you're  
18 referring to; correct?

19 MR. SOPER: I don't understand the  
20 question.

21 Q. (By Mr. Gaukler) I addressed it to --  
22 "Connie, we'll be going through a series of  
23 accident reports, and if we don't come across it  
24 today in going through -- coming across the Moody  
25 accident report -- I would request a copy of the

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1 report he's referring to. If we run across it as  
2 we work our way through the accident -- as we work  
3 our way through, obviously, that'll take care of  
4 the request."

5 So we will look as we went through the  
6 accident reports just to see if there's anything  
7 involving Moody that involved the G-LOC.

8 MR. SOPER: I object to that. That's  
9 not within the question you read.

10 Q. (By Mr. Gaukler) Well, go to page 131.

11 MR. GAUKLER: I would like the Board to  
12 rule on that objection.

13 JUDGE FARRAR: It's the objection -- the  
14 objection sounded meritorious, at least as far as  
15 we've gone so far.

16 Q. (By Mr. Gaukler) Let me go to page 131  
17 of the deposition. Are you there?

18 A. I am.

19 Q. There at page 131 of the deposition, by  
20 this time, we had gone through the 12 accident  
21 reports that you had a disagreement with PFS on;  
22 correct?

23 A. At this particular point, I'm not quite  
24 sure.

25 MR. SOPER: Disagreement with what

1 category they should be in, when you say  
2 disagreement?

3 Q. (By Mr. Gaukler) We had talked about  
4 the 12 accident reports in which you took issue  
5 with PFS?

6 MR. SOPER: You took issue as to what  
7 category they ought to be, Skull Valley or not;  
8 right? That's the disagreement we're talking  
9 about?

10 MR. GAUKLER: Took issue in various  
11 respects.

12 MR. SOPER: No, no, not various  
13 respects.

14 MR. GAUKLER: Okay, that's fine.

15 JUDGE FARRAR: Wait, wait, wait. Talk  
16 to me. Colonel Horstman, do you -- in other words,  
17 when we get to page 131 of the -- was it 131?

18 MR. GAUKLER: Yes, it is.

19 JUDGE FARRAR: 131 of the deposition, do  
20 you remember the context at that point rather than  
21 have Mr. -- how do you remember the context at  
22 that point?

23 COL. HORSTMAN: As I remember, the vast  
24 majority of that deposition had to do with  
25 reviewing the dozen -- and I think the number is

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1 12 -- accidents with respect to which categories  
2 Sevier B, engine loss, Skull Valley. That's what  
3 the scope as I recall.

4 JUDGE FARRAR: And none of those 12  
5 included the Moody -- the G-LOC -- what you say is  
6 the G-LOC Moody accident, did they?

7 COL. HORSTMAN: Right now, I'm not sure.

8 MR. SOPER: With respect to that issue,  
9 Your Honor, yeah, it was included, but the  
10 questions were, what category should that accident  
11 and the other accident reports be in? Not whether  
12 or not there was G-LOC in any of them.

13 MR. GAUKLER: Your Honor, in this one,  
14 the witness agreed with the categories that we had  
15 in our table on this accident. He was disagreeing  
16 with how we characterized the accident itself, and  
17 I was going through his disagreements with our  
18 analysis on the accidents. And I think --

19 JUDGE FARRAR: Before you continue with  
20 that argument, Mr. Gaukler, and forgive us, because  
21 you've been closer to this case for a longer time  
22 than we have, and these things were a story to you,  
23 but they come in to us as pieces of paper. Was the  
24 Moody report, the G-LOC, the one we were talking  
25 about last night, was that one of the 12 in the

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1 General Jefferson, et al.? Was that one of the 12  
2 in their analysis that we spent the earlier part of  
3 this week on?

4 MR. GAUKLER: No.

5 JUDGE FARRAR: Was it one that you were  
6 discussing with Colonel Horstman at his deposition?

7 MR. GAUKLER: Yes, it was.

8 JUDGE FARRAR: Okay, here's my concern.  
9 We seem to be talking around this issue, and I know  
10 where you're trying to get, Mr. Gaukler, and we're  
11 being hamstrung by the fact that this happened at  
12 several different times and we've got a document  
13 that says one thing and the witness says that he  
14 had a conversation that indicates there's more to  
15 the story than that. And somehow, I think we need  
16 to get at this more directly, preserving your right  
17 to see there's an inconsistency between what he  
18 said last night and today and what he said sometime  
19 ago, but somehow we've got to get at this more  
20 directly or we'll be here too long.

21 MR. GAUKLER: I have a couple of more  
22 things along this line which I hope will clarify  
23 it. If you let me complete, then --

24 JUDGE FARRAR: Go ahead, thanks.

25 Q. (By Mr. Gaukler) Let me do it this way:

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1 On page 131 of your deposition, I asked you after,  
2 "we have gone through the various -- gone through  
3 the various accident reports that you've identified  
4 in your declaration. Is that correct?" And the  
5 answer is, "Yes." Correct?

6 A. Correct.

7 Q. And one of the 12 identified in your  
8 declaration was the May 25th, 1990 accident that we  
9 just discussed?

10 A. Yes, sir, it was.

11 Q. And then I go on to say, "Now, when we  
12 started this discussion, you had referred to what  
13 you thought was an accident that had occurred  
14 during G awareness warm-up turns." And you  
15 answered, "Yes." Is that correct?

16 A. That's correct.

17 Q. And then I asked you, "And did any of  
18 these crash reports that we looked at involve that  
19 set of circumstances?" And would you read your  
20 answer into the record, please.

21 A. "No, they did not. And I will look for  
22 it. Obviously, if we get that, we will forward it  
23 to you. It could be in one of the ones that is  
24 missing from both yours and ours. I don't know.  
25 But it was -- as I said, it was in the spring of

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1 1991 flown out of Moody, and it was a G-LOC during  
2 a G warm-up turn."

3 Q. Now, I'd like to hand out State's  
4 Exhibit 50, which was introduced yesterday.

5 JUDGE FARRAR: State's what number?

6 MR. GAUKLER: Exhibit 50.

7 Q. (By Mr. Gaukler) Before we go on, now,  
8 in your answer you just read in the deposition, you  
9 said you would get the report to me if and when you  
10 got it, of this G-LOC accident you were thinking  
11 about; correct?

12 A. That's correct.

13 Q. And did you ever supply us with the  
14 report on that?

15 MR. SOPER: Well, objection, the witness  
16 is under no obligation. That would be a counsel  
17 matter.

18 MR. GAUKLER: The question, in fact, did  
19 he supply the report to counsel?

20 JUDGE FARRAR: Without regard to the  
21 consequences of the answer, let's get the answer --  
22 as a factual matter, get the answer to the  
23 question, and then we can argue about what the  
24 consequences of that are.

25 COL. HORSTMAN: Sir, I haven't provided

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1 anything to you. I provide everything to my  
2 counsel, and so --

3 Q. (By Mr. Gaukler) Did you provide to  
4 your counsel a copy of such a report?

5 A. We had a discussion. Whether or not I  
6 provided them with a specific piece of paper, I  
7 don't recall, but we've discussed the issue with my  
8 counsel.

9 Q. Is there such a document?

10 MR. SOPER: Well, we've looked at it.  
11 Are you asking him about the accident report for  
12 that date? We've discussed it. It's in evidence.

13 Q. (By Mr. Gaukler) So the accident report  
14 now -- you say that in '91, but, in fact, it was  
15 the May 25th, 1990 accident that you claim is the  
16 one; correct?

17 A. Say that one more time. I'm trying to  
18 think.

19 Q. It's -- you indicated in that last  
20 deposition answer that you thought the accident was  
21 in the spring of '91. In fact, you were mistaken  
22 by a year, which is understandable. It was the  
23 spring of '90?

24 A. It may be. I'm not sure. That was 10  
25 years ago.

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1 Q. But anyway, you claim the May 25th, 1990  
2 accident now is that G-LOC accident that you talked  
3 about?

4 A. Yes.

5 Q. Okay. Will you describe for me --

6 JUDGE FARRAR: Wait, wait, Mr. Gaukler,  
7 let me make sure we have this clear. So there was  
8 only one accident that you were referring to? You  
9 said in your deposition the spring of '91, but it  
10 turns out to be the Moody one from 1990, which  
11 would also explain why General Cole's E-mail asked  
12 for fiscal year '91, based on that answer.

13 MR. GAUKLER: We asked for the '91 and  
14 one year either side just to be conservative.

15 MR. SOPER: The record ought to show  
16 that based on that request, we did provide the  
17 report, and it was -- the correct date was shown on  
18 it. This was his best recollection of the date.  
19 But the point of this is he got -- we provided the  
20 correct date. I mean that was his recollection of  
21 the date.

22 JUDGE FARRAR: And you did, in fact, get  
23 the report because you introduced it last night?

24 MR. GAUKLER: We had the report.

25 JUDGE FARRAR: Okay.

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1 Q. (By Mr. Gaukler) Now, looking at  
2 Plaintiff's Exhibit 50, State Exhibit 50, which is  
3 a - I take it, an Air Force data on F-16 failures  
4 for various years and for various types of  
5 aircraft, various types of F-16 aircraft?

6 A. It's the accident rate for the various  
7 F-16 accidents.

8 Q. Yeah, and you have it broken -- the  
9 different sheets have different information;  
10 correct?

11 A. Yes.

12 Q. Now, if you go to the last sheet, and it  
13 says F-16 history, G-LOC?

14 A. Yes.

15 Q. Now, I take it the column under G-LOC  
16 shows a number of F-16s destroyed -- the number of  
17 F-16 accidents due to G-LOC in any particular year?  
18 That's correct?

19 A. I'm not sure. Let me take a look at  
20 this. I believe what it shows is number of  
21 destroyed aircraft and the number of G-LOC  
22 incidents. As you'll notice, there are some  
23 incidents that don't -- that the pilot wakes up and  
24 flies home. So the numbers are slightly different.

25 Q. If you look -- now, May 25th, 1990, that

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1 would fall in fiscal year 1990; correct?

2 A. That's correct.

3 Q. And if you look at the data for fiscal  
4 year 1990 down about midway, and you go over three  
5 columns, can you tell me how many G-LOC incidents  
6 it shows for fiscal year 1990?

7 A. It shows zero.

8 Q. Thank you. In fact, Lt. Colonel  
9 Horstman, in your review -- in your initial review  
10 of the aircraft crash report, you didn't take issue  
11 with any of the categorizations of the accidents  
12 done by General Cole, General Jefferson and Colonel  
13 Fly; correct?

14 A. As I recall, I wasn't asked to do that.  
15 So no, I didn't.

16 Q. Now, if you look at your deposition --  
17 let's go back now to your other deposition, the  
18 December 11 deposition.

19 A. I've got it.

20 Q. If you look on page eight of your  
21 deposition, the December 11 one, I asked you --  
22 excuse me, look on page seven, going onto page  
23 eight. And I asked you whether you reviewed  
24 anything else besides the safety analysis report  
25 with respect to what the state provided to you;

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1 correct?

2 A. Correct.

3 Q. And the answer, "I reviewed all the  
4 documents that the State provided. The crash issue  
5 was one of them. There were half a dozen. As far  
6 as the exact titles, I'm not clear of them." And  
7 then I asked you, "Did you review a report by  
8 Brigadier General James Cole? Yes. And what  
9 opinion did you tell the State at that point in  
10 time with respect to your review of those  
11 documents? I said that based on the assumptions  
12 that were used to generate all the data, I was in  
13 agreement with all of the expert testimony for the  
14 PFS side. And that was expert testimony set forth  
15 by --" And you answer, "Essentially Colonel Fly.  
16 The other issues with respect to generic aircraft  
17 crash issues are very logical. I'm not as much of  
18 an expert on the life cycle of all the aircraft in  
19 the Air Force, but as far as the specific F-16  
20 issues and the Skull Valley issues, I reviewed all  
21 of those."

22 Does that correctly state your response?

23 A. It does.

24 Q. And then I asked you, "And you were in  
25 general agreement with what Colonel Fly said?" And

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1 your answer is, "Absolutely. Based on the  
2 parameters he was given, I agree."

3 And that correctly states your answer?

4 A. Yes.

5 Q. Now, the State -- you did identify  
6 specific issues that you took issue with, very  
7 limited issues as you characterized them; is that  
8 correct?

9 A. I don't recall.

10 Q. Now, I'd like to have you look at -- on  
11 page 69 and 70.

12 A. Of the same document?

13 Q. Yes, uh-huh. That was 68, excuse me.  
14 And to this answer, I'd like to hand out the  
15 State's Supplemental Response to Applicant's First  
16 Set of Discovery Requests for Contention Utah K.

17 A. Okay.

18 Q. Do you remember this document?

19 A. Generally speaking, yes.

20 Q. And this was a document that -- your  
21 signature appears on the end of it; correct?

22 A. Yes.

23 Q. And you swore to the truth of the  
24 answers with respect to the various issues  
25 identified in this document, various issues you

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1 took with the PFS report beginning on page three?

2 A. Would you like me to read the  
3 declaration?

4 Q. No. You were swearing to the truth of  
5 those issues?

6 A. Oh, yes, I'm sorry.

7 Q. And this document is what we were  
8 discussing at this point in the deposition, your  
9 identification of various issues; correct?

10 A. I'm going to have to go back and review  
11 it.

12 Q. Yeah, go back and review it.

13 A. Because honestly, I'm having a hard time  
14 tracking back and forth.

15 Q. If you look on page 67, where I say, let  
16 me show -- it may go back to the bottom of page 66.

17 A. I'm with you there. I just want to make  
18 sure that I'm on the correct --

19 Q. Go ahead, take your time.

20 A. Okay, I'm caught up.

21 Q. You agree that this was a document we  
22 were discussing?

23 A. Yes.

24 Q. And I asked you on the bottom of page  
25 69, referring to the document, "You have, you go

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1 through and outline six or seven or eight issues,  
2 depending on how you count them in different ways."

3 And I was talking to issues that you were raising  
4 with respect to the report; correct, that document?

5 A. With respect to this document, yes.

6 Q. And those were issues you were raising  
7 with respect to the aircraft crash report?

8 A. Yes, I believe so.

9 Q. And then I asked you, "I take it, then,  
10 that these issues that you've outlined here are  
11 your list of concerns with respect to the report,  
12 Private Fuel Storage report, and outside of these  
13 concerns, you generally agree with the report, have  
14 no problems with it?" And you respond, "Correct."  
15 Isn't that right?

16 A. That's correct, because at the time I  
17 hadn't been asked to go do a much more in-depth  
18 analysis.

19 Q. Now, first of all, you didn't identify  
20 taking issue with any of the categorization of  
21 PFS's accident investigation?

22 A. At the time, that's correct, sir.

23 Q. And it was true at that point in time,  
24 you had reviewed those accident reports; correct?

25 A. Yes, I had reviewed the accident

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1 reports. As previously stated, I had been asked to  
2 analyze a certain piece of the data and then I was  
3 asked to analyze a further piece of the data later.

4 Q. Let me be clear about this. You  
5 reviewed the accident investigation reports prior  
6 to the preparation of this supplemental response  
7 and prior to your December 11, 2000 deposition?

8 A. Yes, sir, that's correct.

9 Q. Okay. And then if you go to page 203 of  
10 your deposition, the same one, the December 11,  
11 2000 deposition.

12 A. I'm there. Go ahead.

13 Q. And here I'm asking you about some  
14 general questions with respect to the report. On  
15 the bottom of page 203, I say, "Going back to the  
16 report again, PFS report, did you review Tab H of  
17 the report where they talked about reviewing the  
18 reports?" Referring to the accident investigation  
19 reports. And you say -- your answer is, "Yes, I  
20 have." Correct?

21 A. That's my testimony, yes, sir.

22 Q. And again Tab H is the tab to the  
23 aircraft crash report that we looked at just a few  
24 moments ago that sets forth General Cole's, General  
25 Jefferson's and Colonel Fly's analysis and

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1 categorization of the various accident reports they  
2 looked at into the various categories, like Skull  
3 Valley type events, Sevier B events, engine  
4 failure?

5 A. Yes, that's correct.

6 Q. And then I asked you, "And did you  
7 identify anything in particular there that you  
8 disagreed with or took issue with?" And you say,  
9 "Not particularly, no." Is that correct?

10 A. That's my testimony, yes, sir.

11 Q. And that's what's correct at that point  
12 in time; correct?

13 A. Yes, sir.

14 Q. Now, you didn't say anything in your  
15 deposition, did you, that you had only done a  
16 partial review of the report? In any of these  
17 answers we've looked at where I asked you if you  
18 agreed with the report, you never saw any  
19 qualification that said it was only a partial  
20 response, partial review on your part, did you?

21 .A. I don't know. I don't recall, I'm  
22 sorry.

23 MR. SOPER: Your Honor, can I just pose  
24 an objection at this point. This whole matter of  
25 two depositions of Colonel Horstman has been

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1 briefed and argued and has been the subject of much  
2 adieu previously, because Colonel Horstman did not  
3 review each of the 126 reports in great detail for  
4 his first deposition. As a result PFS was  
5 permitted to take a second deposition for that very  
6 reason.

7 JUDGE FARRAR: Briefed and argued where?

8 MR. SOPER: Well, I think it was in  
9 respect to the Motion for Summary -- Motion to  
10 Strike, and they were permitted --

11 JUDGE FARRAR: That was before my time?

12 MR. SOPER: Yes. Yeah, excuse me. It  
13 was before mine, as well.

14 JUDGE FARRAR: Well, this ought to be a  
15 good conversation.

16 MR. SOPER: Yeah. My understanding from  
17 looking at the history of the case and the  
18 documents is that they objected to the fact that  
19 Colonel Horstman, upon great detail in review of  
20 these 126 reports addressing particular issues, did  
21 have some issues with them. As a result, they were  
22 allowed to depose him a second time. And so now  
23 we're going back and arguing why he was allowed to  
24 be deposed a second time claiming that the  
25 differences between his first deposition and second

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1 deposition, which have already been clearly  
2 identified, are somehow related to his credibility.  
3 I don't think that this is a proper cross for this  
4 witness at this time. This is -- he has a second  
5 deposition from this proceeding.

6 MR. GAUKLER: I think it's entirely  
7 related to his credibility. I asked him several  
8 questions that we've gone through, as you've seen,  
9 in terms of his disagreement with his report, and I  
10 asked him specifically whether this supplemental  
11 discovery was the list of his disagreements. And  
12 he said yes. And every time I asked him otherwise,  
13 he said he was in general agreement with the  
14 report. And while -- and therefore, I think it  
15 goes to his credibility. He didn't provide any  
16 qualification in his answers that this was only a  
17 partial review, why he -- I didn't really do a  
18 detailed review of the accident reports.

19 JUDGE FARRAR: Let me talk to my  
20 colleagues unless the Staff wants to get involved  
21 in the middle of this.

22 MS. MARCO: Well, I think it's fair to  
23 explore why he changed his mind.

24 MR. GAUKLER: And if I could go forward,  
25 I'm going to have some questions on the

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1 supplemental deposition I think which shows the  
2 depth at which he reviewed the reports.

3 (Judges conferred off the record.)

4 JUDGE FARRAR: Let me tell you what  
5 we're thinking and kind of motivated by the extra  
6 document we asked all of you to prepare sometime  
7 ago, the preface to your prepared testimony, and we  
8 said the reason we wanted that preface is when you  
9 read great big long documents, it helps you to read  
10 them if you know why you're reading them. When  
11 that dealt with the cross-examination plans and the  
12 preface and the key determinations paper, so that  
13 when we pick up these reams of paper, we know why  
14 we're reading them. It strikes me, Mr. Soper,  
15 Mr. Gaukler, that as I -- and this was before my  
16 time, Mr. Soper, the events and the arguments you  
17 refer to, but it seems to me, it is fair that if a  
18 witness is asked to read something for one purpose  
19 and asked his conclusions, it's not illegitimate  
20 that later if he's asked to read it for another  
21 purpose, he would have different conclusions. And,  
22 Mr. Gaukler, it's entirely fair where you're trying  
23 to go, but there's something to Mr. Soper's  
24 objection, and I'm wondering if we can't --

25 MR. GAUKLER: May I ask my next question

1 and answer, please?

2 JUDGE FARRAR: Yeah, go ahead.

3 Q. (By Mr. Gaukler) Mr. -- Lt. Colonel  
4 Horstman, would you please turn to your July 27,  
5 2001 deposition.

6 If you look at page nine -- and this was  
7 a supplemental deposition that was held  
8 specifically to go through the accident reports  
9 that you had identified in your declaration in  
10 which you took issue with PFS analysis; correct?

11 A. That's correct, sir.

12 JUDGE FARRAR: Mr. Gaukler, for my  
13 information, this is the supplemental deposition  
14 that was ordered after some debate in front of the  
15 Board, then headed by Judge Bollwerk?

16 MR. GAUKLER: Yes.

17 JUDGE FARRAR: Okay.

18 Q. (By Mr. Gaukler) On Page 9, I asked  
19 you, "With respect to the F-16 accident reports  
20 that were reviewed by PFS in this matter which are  
21 reflected in Tab H here, when did you first review  
22 these reports?" You say, "I don't know the exact  
23 date." But then I go on to say -- ask you, was it  
24 before your deposition and you say, yes, just like  
25 you said here right now; correct?

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1 A. That's correct, sir.

2 Q. And then I say, the bottom of page nine,  
3 top of page 10, "Will you describe for me your  
4 review of the accident reports at that time?" And  
5 will you read what you responded.

6 A. "I read all the accident reports and  
7 looked at how they were portrayed or characterized  
8 -- I'm sorry, categorized, what type of incident,  
9 whether it was in flight or on the ground, those  
10 types -- those kinds of things for the categories  
11 of all the reports."

12 Q. And I go on to ask, "Did the State  
13 specifically ask you to review the reports?" And  
14 what was your answer?

15 A. Yes.

16 Q. And then I asked you on the bottom of  
17 page 11, after discussing the fact you had taken a  
18 different position or you're taking issue in your  
19 declaration, "How was it that you came to take a  
20 position that certain of the accident reports had  
21 not been correctly evaluated by PFS?" And what's  
22 your answer?

23 A. "When we went back a second time and  
24 reviewed them, we thought that there were some that  
25 were potentially categorized incorrectly."

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1 Q. And then I asked you who's we? "We  
2 being what?" And what's your answer?

3 A. "We being counsel, myself and part of  
4 her staff."

5 Q. And then I asked you, "And this was a  
6 joint review that you did with them?" And you say?

7 A. "It was."

8 Q. And then I asked you who the Staff was  
9 that you're referring to, and you referred to  
10 Dr. Marvin Resnikoff? If you look at line seven,  
11 "Who else of her staff?" You refer to counsel, and  
12 I said, "Who else of your staff?" And you say, "I  
13 won't even say the last names. Matt and Marvin,  
14 and I believe you have their last names." And now  
15 we know that Marvin is Dr. Marvin Resnikoff;  
16 correct?

17 A. I knew at the time, I just couldn't  
18 remember his last name. Sorry, sir.

19 MR. GAUKLER: I think I'm done with this  
20 line of questioning, actually.

21 JUDGE FARRAR: Okay.

22 (Judges conferred off the record.)

23 JUDGE FARRAR: Mr. Gaukler, you're  
24 finished this line, but not this witness?

25 MR. GAUKLER: That's right. Exactly

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1 right.

2 JUDGE FARRAR: And, Mr. Soper, we have  
3 some questions on this line, but are you going to  
4 do redirect when it gets to be your turn? Because  
5 if you're not, we might ask some questions now.

6 MR. SOPER: Well, you know, I invite  
7 Your Honors to do that, because I think it's very  
8 helpful and you always have good questions, and so  
9 I wouldn't want to discourage that. I'll try not  
10 to cover the same thing you do. Often it prevents  
11 me from having to go over it, and I think it's more  
12 important what's on your mind than mine.

13 JUDGE FARRAR: You didn't think that  
14 last night at 9:15.

15 Colonel Horstman, there's been -- and  
16 this may not go directly to Mr. Gaukler's question,  
17 but this business about this Moody business and the  
18 G-LOC, it keeps coming back that while there's no  
19 report that says that or, in fact, the fiscal year  
20 '90 data says zero, and the E-mail that General  
21 Cole got back says we can't find any records, there  
22 are no incidents like that, we're thinking that the  
23 simple explanation for all that is the record  
24 doesn't -- the record indeed does not reflect that  
25 that's a G-LOC incident. In other words, if I were

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1           answering the Freedom of Information Act request  
2           for the government and someone said, we want all  
3           your G-LOC reports for a certain period of time, I  
4           wouldn't -- G-LOC accident reports, I wouldn't give  
5           them the Moody report as being responsive, would I?  
6           Or would I?

7                       COL. HORSTMAN: I'm not quite sure what  
8           you're asking, but I think I can help you.

9                       JUDGE FARRAR: Well, yeah, you said you  
10          were the executive assistant to a General. Suppose  
11          the Moody report had happened where you were  
12          stationed and the Freedom of Information Act  
13          request came in and said, give us all your accident  
14          reports that conclude there was a G-LOC factor in  
15          1990. You would not have supplied that report,  
16          would you?

17                      COL. HORSTMAN: No. It's not written  
18          down in this report.

19                      JUDGE FARRAR: Right. So when you sit  
20          here -- so what we have in this case, the issue in  
21          this case then becomes, no matter how many times we  
22          ask the government for G-LOC reports or no matter  
23          how many times the government puts out a report  
24          that says here's how many G-LOCs there were in  
25          given years, this incident is never going to show

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1 up in there; right?

2 COL. HORSTMAN: That's correct, sir.

3 JUDGE FARRAR: But your testimony, which  
4 can be tested, is that you had this conversation  
5 and you were of the personal view based on the  
6 conversation with somebody, that was, in fact,  
7 G-LOC?

8 COL. HORSTMAN: Yes, sir, that's  
9 correct.

10 JUDGE FARRAR: Mr. Gaukler, are you  
11 going to discuss the G-LOC issue in your cross in  
12 any other fashion other than this report?

13 MR. GAUKLER: I don't intend to right  
14 now.

15 JUDGE FARRAR: Okay, then let me ask --  
16 if you're not, let me ask another question as long  
17 as we're on it.

18 When I reviewed your testimony last  
19 night about G-LOC, and then the following question  
20 and answer dealing with large birds, I was even  
21 more concerned about pilots' day-to-day activity  
22 than I was when the Generals were on here because  
23 it sounds like here is something you can be doing  
24 -- your plane is doing fine, you're doing fine,  
25 you're doing everything right and all of the

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1 sudden, here are these two untoward events and  
2 suddenly you're having a bad day and it wasn't your  
3 fault.

4 COL. HORSTMAN: That's how it works,  
5 sir.

6 JUDGE FARRAR: But these reports,  
7 assuming they're properly characterized, and forget  
8 the Moody thing. These, as frightening as they  
9 seem to me as a layman, these would be captured in  
10 the F-16 crash rate, would they not? Assuming a  
11 crash -- you didn't recover from the G-LOC and you  
12 didn't recover from the bird, as you've described  
13 in here. As concerned as that makes me feel about  
14 the dangers of being a pilot, the crash -- and I  
15 read it and said, wow, does this happen alot? The  
16 answer whether it happens alot is captured in the  
17 F-16 crash data?

18 COL. HORSTMAN: If the airplane crashes?

19 JUDGE FARRAR: If the airplanes crashes.

20 COL. HORSTMAN: Yes, sir. As an  
21 example, I've probably hit a hundred birds and  
22 never jumped out. So, you know, they fixed the  
23 bird strike, it could be a category B accident, but  
24 there's no death or million dollars in damage.

25 JUDGE FARRAR: Let me ask you one

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1 question that's been on my mind for some time.  
2 When you all talk about your hours per month, it  
3 seems like a lesser amount of hours than I would  
4 expect. When you're -- how long does one of these  
5 typical Skull Valley missions last in the air?

6 COL. HORSTMAN: Let me give you a brief  
7 description of a typical day, because that will  
8 help.

9 JUDGE FARRAR: That was my next  
10 question, so you're one ahead of me.

11 COL. HORSTMAN: A typical fighter pilot  
12 at Hill Air Force Base -- call it the average guy  
13 for whatever term, is going to be scheduled to fly  
14 about three and a half times a week, maybe four.  
15 If you're an instructor, maybe a little bit more.  
16 So it varies depending on your capability as a  
17 pilot, teacher, et cetera. So if you're scheduled,  
18 for example, three times a week with the  
19 maintenance rates, et cetera, you can probably  
20 expect to fly about an average of two and a half,  
21 maybe two and three quarters sorties a week because  
22 you're going to lose some due to maintenance and  
23 with this and that.

24 So on your given day, you'll show up to  
25 the squadron about two and a half to three hours

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1 prior to your flight. And you will then go through  
2 the mission preparation, the mission briefing,  
3 you'll step to the aircraft 30 minutes prior  
4 takeoff, go do your preflight, go into the airplane  
5 and then go fly your sortie. Your sortie is going  
6 to be I think -- at least when I was running the op  
7 stuff, it was about 1.3. So an hour and 15 minutes  
8 to an hour and 20 minutes is the typical flight.  
9 At the conclusion of the flight, all flight  
10 members, all formation members, both if it's an  
11 air-to-air, both teams, both -- all the players  
12 will get together and they'll debrief for between  
13 one and four hours. So on a typical fighter pilot  
14 day, you're going to work nine hours, you're going  
15 to fly an hour and 15 or 20 minutes. Is that  
16 helpful?

17 JUDGE FARRAR: Yes, very much. What do  
18 you do on the other days, the days you're not  
19 scheduled?

20 COL. HORSTMAN: Each squadron member has  
21 a variety of other duties. Some are internal to  
22 the squadron and some would be at a wing level job.  
23 Pilots schedule themselves, as an example. So you  
24 be a scheduler, either at the squadron level or the  
25 wing level. There's training -- and I got a

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1 laundry list. But unfortunately, the days you  
2 don't fly, are typically longer than the days you  
3 fly.

4 JUDGE FARRAR: So you're not just  
5 sitting around waiting to fly the next day?

6 COL. HORSTMAN: No, that's a World War  
7 II movie.

8 JUDGE FARRAR: You don't want to go  
9 there, because I tried to mention Spartacus the  
10 other night and the room didn't get it. Because I  
11 was trying to compliment the audience and they  
12 didn't quite get it. Mr. Silberg got it, but  
13 nobody else.

14 JUDGE LAM: And he didn't sleep that  
15 night, too.

16 JUDGE FARRAR: On that note, let's take  
17 a break. We've been at it almost a couple of  
18 hours.

19 Mr. Gaukler, do you need a lot or a  
20 little of a break in order to prepare for your next  
21 line, or are you just about ready? And then I'll  
22 make the break longer or shorter depending on --

23 MR. GAUKLER: Give me about 10 minutes.

24 JUDGE FARRAR: Okay, I'll make the 15.  
25 It's five of. We'll come back at 10 after.

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1 (A recess was taken.)

2 JUDGE FARRAR: It looks like everybody  
3 is here, so let's get back with Colonel Horstman.

4 MR. SILBERG: One item. At the  
5 beginning of the week, the Board asked us to  
6 prepare a revised aircraft crash report and a  
7 revised addendum with the deletions. We have not  
8 been able to accomplish that task. We have copies  
9 printed up, but we have not done the removal, and  
10 we will send those back to Washington and  
11 distribute them.

12 JUDGE FARRAR: Fine. It hasn't seemed  
13 to have hampered our counsel or us thus far this  
14 week, so if we get those at some appropriate time.

15 MR. SILBERG: On the other hand, if the  
16 Board decides having been through the process, we  
17 don't really need that, we will certainly not  
18 object to not prepare them. But that's up to the  
19 Board.

20 JUDGE FARRAR: Mr. Silberg, was that as  
21 a result of the consequences ruling?

22 MR. SILBERG: Yes.

23 MR. BARNETT: And the fact that we just  
24 decided we were not introducing certain parts of  
25 it. That was back in February when we sent it

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1 around. It was a letter. There were certain parts  
2 that we were just not introducing at all.

3 MR. SILBERG: We have them copied, but  
4 we have to go through --

5 JUDGE FARRAR: Yeah. And just make sure  
6 that if anything comes up in the remainder while  
7 we're here, that you realert us that there's been a  
8 change if it's relevant to whatever the particular  
9 inquiry is at the time.

10 MR. SILBERG: Certainly will. The  
11 LaSalle rule still lives or is it McGuire rule?

12 JUDGE FARRAR: All right. Mr. Gaukler.

13 Q. (By Mr. Gaukler) I just have a couple  
14 of quick questions to follow up on G-LOC very  
15 briefly. You mentioned that you base your position  
16 on a conversation you had with General Ryan some  
17 time after the completion of the accident  
18 investigation; correct?

19 A. Yes, sir.

20 Q. And do you know whether General Ryan was  
21 expressing his personal view or the opinion of the  
22 Board?

23 A. I don't know that, sir.

24 Q. You don't know that?

25 A. No, sir.

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1 Q. And if it was the opinion of the Board,  
2 you would expect it to be reflected in the report;  
3 correct?

4 A. Probably. And let me clarify. There's  
5 a number of accidents which happen that they really  
6 don't know why the airplane hit the ground. They  
7 generally try to categorize those as a loss of  
8 situational awareness, as an example. And the  
9 Board takes an educated, very educated guess,  
10 because there's no positive proof. So it could  
11 have been discussed, I don't know, I wasn't there.  
12 But accident investigations rely on a lot of  
13 empirical data, a lot of factual data and opinion.

14 Q. But if it's the Board's opinion, you  
15 would expect it to be reflected in the report  
16 itself, if it was the Board's opinion?

17 A. Yes, sir, I certainly would.

18 Q. I'd like to go to question and answer 16  
19 of your testimony, prefile testimony.

20 A. Okay.

21 Q. There you were asked what is the typical  
22 flight path of F-16s transiting Skull Valley;  
23 correct?

24 A. Yes, sir.

25 JUDGE FARRAR: Mr. Gaukler, hold on.

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1 Exhibit which to his --

2 MR. GAUKLER: This is his prefile  
3 testimony itself.

4 JUDGE FARRAR: And it's an exhibit to  
5 it?

6 MR. GAUKLER: No, question 16 to it.

7 JUDGE FARRAR: Okay, thank you.

8 Q. (By Mr. Gaukler) And your answer, first  
9 answer is, "Most flights are in the Sevier B MOA  
10 due to the flight path from Hill Air Force Base and  
11 the physical layout of Skull Valley. A flight will  
12 enter Skull Valley heading in a southwest to south  
13 direction and will then turn south to southeast.  
14 Thus the natural typical flight of an F-16  
15 formation is essentially down the middle of Skull  
16 Valley with part of the formation flying over or  
17 near the proposed PFS site because the formation  
18 must maintain a safe distance from the Stansbury  
19 Mountain to the east and the restricted airspace to  
20 the west."

21 That's your answer; correct?

22 A. Yes, sir.

23 Q. Now, with respect to -- you referred to  
24 a buffer zone against the Stansbury Mountains of  
25 approximately two miles; correct?

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1 A. That's correct.

2 Q. And there's no written guidelines or  
3 directions to maintain such a distance from the  
4 mountains; isn't that correct?

5 A. No, and I think if you'll --

6 Q. That's correct; right? There's no  
7 written procedure or direction in that respect?

8 A. That's correct.

9 Q. Now, with respect to pilots flying down  
10 the middle of Skull Valley, in the middle and  
11 southern part of Skull Valley, that really isn't  
12 possible because the MOA, the restricted area comes  
13 over towards -- into the center of the valley;  
14 correct?

15 A. A little more clear on that question.

16 Q. Isn't it true, at least where the PFS  
17 site is and further down from the PFS site, you  
18 wouldn't be flying in the middle of Skull Valley  
19 because the restricted area itself comes over into  
20 towards the middle of Skull Valley, and actually by  
21 the time you reach Dugway, it is in the middle of  
22 the valley; correct?

23 A. Let's start from the southerly end and  
24 work up. Skull Valley isn't -- Sevier Bs go way  
25 beyond. In Skull Valley, you physically cannot fly

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1 down the middle of Skull Valley forever. I agree  
2 with you there. But I'm not quite sure what I'm  
3 trying to answer.

4 Q. Okay. Let's go to your deposition.  
5 This would be the December 11 deposition. In your  
6 December 11 deposition, on page 104.

7 A. I'm there.

8 Q. Okay. And there I asked you -- let's  
9 focus on basically what Brigadier General Cole was  
10 told by Vice Commander Oholendt and others that the  
11 predominant route of flight was down the east side  
12 of the valley. And I asked you, "Would you  
13 generally agree with that?" And your response is,  
14 "For one of the -- if there's a two ship, for one  
15 of the two yeah, but not for both."

16 So there you're saying, for one would be  
17 on the east side. If you had a two-ship formation,  
18 which is about a mile and a half, two miles apart,  
19 one would be on the east side, generally?

20 A. Generally speaking, that's true.

21 Q. And then I said, "Well, two ships, are  
22 you talking about a mile apart?" And you answered,  
23 "Mile and a half to two miles. Two, yeah, we'll do  
24 that." And so my next question, "So generally,  
25 both those would be, say, east of Skull Valley

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1 Road, in that situation, and that would be  
2 generally the predominant route?" East of Skull  
3 Valley Road. And you say -- you agree. You say,  
4 "Yeah, I guess that's fair to say."

5 And that's a correct -- that's your  
6 answer?

7 A. Yes, sir, that's correct.

8 Q. And you would agree with that today;  
9 correct?

10 A. Yes.

11 Q. If you have a squadron of four -- the  
12 next question was, "If you have a squadron of four,  
13 it would basically be the same thing, just have the  
14 other two behind the first two?" Correct? First  
15 -- and you answer correct; right?

16 A. Yes.

17 Q. And so generally, you're in a four  
18 squadron flight, generally, it would be true that  
19 the eastern side of the valley, defined as east of  
20 Skull Valley Road would be the predominant flight;  
21 correct?

22 A. In the northern half, yes.

23 Q. And southern half, too; right? I guess  
24 it would be further east, wouldn't it?

25 A. Well, there's no mountains. I mean it's

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1 kind of irrelevant. Once you're past the site, it  
2 becomes irrelevant.

3 Q. Okay. Now, I'd like to turn to question  
4 21 of your testimony. On question 21, you were  
5 asked, "Please describe low altitude training that  
6 occurs in Skull Valley." And you respond that, "A  
7 pilot conducting low altitude training typically  
8 flies from 1,000 to 2000 feet AGL. Low altitude  
9 training may occur at lower standards", and then  
10 you say, "I have conducted low altitude night  
11 training at levels of 500 to 600 feet above ground  
12 level through Skull Valley."

13 A. Yes, sir.

14 Q. Now, isn't it true that north of Dugway,  
15 the minimum altitude for flights is 1,000 AGL?

16 A. Yes, sir, and south of that, you can go  
17 lower.

18 Q. And so therefore, you're not referring  
19 to -- will you show on the map --

20 A. Sure.

21 Q. -- at what point above it's a 1,000 AGL  
22 minimum.

23 A. You can fly at a thousand feet above the  
24 ground level --

25 JUDGE FARRAR: Colonel Horstman, hold

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1 on. I want to come over and look at that more  
2 closely.

3 MS. NAKAHARA: Would you like for him to  
4 move it up?

5 JUDGE FARRAR: Yeah.

6 MR. SILBERG: Yeah, let me act as an  
7 easel.

8 COL. HORSTMAN: For brief orientation  
9 now you've seen this, this little faint looks to be  
10 an erased X is the proposed site.

11 JUDGE FARRAR: And is Skull Valley -- in  
12 other words, what's that tan thing, topographically  
13 is the --

14 COL. HORSTMAN: Great Salt Lake, salt  
15 flats and some mud flats around them. Mountains,  
16 mountains. The valley is considered Skull Valley.  
17 Okay?

18 You can fly down to -- essentially --  
19 and there's a latitude, but I don't recall  
20 precisely what it is -- down to a thousand feet  
21 above the ground level heading north to south or  
22 any way for that matter. Once you get beyond here,  
23 you can descend to a lower altitude for true low  
24 level training.

25 JUDGE FARRAR: Now, here was close to

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1 the tower?

2 COL. HORSTMAN: It's well beyond.

3 JUDGE FARRAR: For the record, when you  
4 said here, is a little east --

5 COL. HORSTMAN: Essentially it being  
6 Dugway.

7 JUDGE FARRAR: No, for the reporter and  
8 the people who read this later, it was east of the  
9 town of Dugway on the map. At that point, the  
10 valley has gotten considerably narrower because the  
11 western mountains have come in --

12 COL. HORSTMAN: No, sir, because the  
13 eastern mountains have come in and the restricted  
14 area is coming in from the west.

15 JUDGE FARRAR: Okay. And where is  
16 Dugway Proving Ground on there?

17 COL. HORSTMAN: This is the Dugway, the  
18 Michael's Army Airfield. Dugway Proving Ground is  
19 a large hung of real estate.

20 JUDGE FARRAR: And do you fly over that  
21 at all, or because of the things they do there, how  
22 restricted is that?

23 COL. HORSTMAN: We fly over it  
24 regularly. As an example, when you shoot  
25 approaches, for example, an engine-out, flame-out

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1 approach, you practice those at Michael's Army  
2 Airfield, that's the primary place to practice it,  
3 so you're flying over parts of Dugway. There are  
4 parts of Dugway that are further restricted air  
5 spaces, and without getting into a map, that are no  
6 fly zones to 10,000 or 12,000, they shoot  
7 artillery, things like that.

8 JUDGE FARRAR: But how about the things  
9 at Dugway where they have chemicals and things like  
10 that that you wouldn't want to have -- you wouldn't  
11 want to impact on?

12 COL. HORSTMAN: Based on all my  
13 briefings and watching new guys and all the local  
14 area checkout, you don't fly in restricted areas on  
15 a map. If there is a hazardous building, whatever  
16 you want to call it, and there's no red circle on  
17 your map over it, you can feel free to fly over it  
18 at essentially any altitude, which includes the  
19 Tooele stuff that we were talking about yesterday,  
20 that I don't have a clue where they are.

21 JUDGE FARRAR: Thank you. Show me with  
22 your pointer how you then -- you enter Skull Valley  
23 from over the lake.

24 COL. HORSTMAN: Generally, as Colonel  
25 Fly said, your departure comes in over the lake,

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1 and you're over the Great Salt Lake and you enter  
2 towards the south to southwest. Because if you go  
3 straight down, you're going to miss it. So you  
4 come down in through this way and because the  
5 mountains are higher, then you have to come in at  
6 some point here. A prudent pilot wouldn't have --

7 JUDGE FARRAR: And for the record, that  
8 was between the mountains about halfway down the  
9 map.

10 COL. HORSTMAN: A prudent pilot would  
11 not enter over here, because he's immediately going  
12 to have to take a turn, and the buffer we talked  
13 about, a prudent pilot wouldn't also go right up  
14 next to this area, because you can get violated and  
15 get in trouble and and it's a painful week.

16 So they would typically come in,  
17 basically, this is a notional steer point that they  
18 use. And I think I should take a moment and  
19 describe that.

20 JUDGE FARRAR: That's the eastern little  
21 tip of mountains that sticks out near the No. 6048  
22 on the map?

23 COL. HORSTMAN: Yes, there's a 6,048  
24 feet knoll. It's a very generic knoll. It's kind  
25 of hard to see, but it gives you your initial

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1 navigation steer point driving into Skull Valley.  
2 And you use that because that's the first time you  
3 start doing those checks that Colonel Fly talked  
4 about. The only way you know how accurate your  
5 fuel is to gauge it based on a steer point. So  
6 this is -- you know, how many miles per gallon am I  
7 getting, and this is the measurement point.

8 So you would fly in a two ship -- and I  
9 need to tell you that the Air Force doesn't let  
10 inexperienced single ship pilots fly down here.  
11 They won't let an inexperienced single ship pilot  
12 fly down here and go out to the range. They don't  
13 trust them. So it's going to be a two ship or a  
14 four ship or an eight or a 16, larger and larger.

15 And the standard formation is two miles  
16 line abreast. So you're going to come into, on a  
17 south to southwest heading, and at some point,  
18 you're forced by geography and restricted area, to  
19 make a turn to go down into the neck of the valley  
20 as Colonel Fly described it. So whether you come  
21 straight over here and all the way down or straight  
22 over here and all the way down, is a matter of  
23 convenience. And the convenient thing to do is to  
24 use a preplanned steer point that you could  
25 probably identify, and there is absolutely nothing

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1 east of the knoll. The standard, what we call a  
2 Delta point, because you type in like D-85 in the  
3 computer, is the knoll. So the flight lead would  
4 aim at the knoll.

5 JUDGE FARRAR: Okay, let me -- going  
6 back to our discussion of what your day is like.  
7 Do you guys in that three hours before the flight,  
8 say today, we're going to enter this way, or when  
9 you're halfway there, does the lead plane say  
10 here's what I figured out we'll do today?

11 COL. HORSTMAN: Both. You preplan your  
12 best activity. And quite honestly, most -- there's  
13 a hundred or 200 Delta points. Why try to pull  
14 coordinates off of this when you're inaccurate when  
15 you already know exactly what the coordinates of  
16 this are.

17 JUDGE FARRAR: This meaning that knoll?

18 COL. HORSTMAN: The knoll is at least  
19 identifiable. You type it in and it's point, and  
20 you select kind of a canned flight plan down  
21 through here, and that would be your first point.  
22 At any time of the mission, the flight lead, if  
23 he's early or late, can do different things. If  
24 you enter here early, you can orbit once, you can  
25 slow down, or later on down the flight. If you

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1 enter late, then you're going to speed up. And if  
2 you're 10 minutes late, for example, you could go  
3 down to here and make a right-hand turn, with  
4 permission, into the restricted airspace. If you  
5 were really late. Because --

6 JUDGE FARRAR: Late for what?

7 COL. HORSTMAN: Range time. And the  
8 whole restricted airspace, if you have a bombing  
9 range time, air-to-air time, it's a 20-minute block  
10 typically. And in that 20-minute block, if you're  
11 five minutes late, that's perishable. That lettuce  
12 is rotten, can never be used again. Okay.

13 So as you proceeding from the north to  
14 the south, assuming this is the steer point because  
15 it's a logical, it's easy to do, your wing man is  
16 off to your right at a mile and a half to two miles  
17 is the generally accepted formation.

18 JUDGE FARRAR: Why so, what I would  
19 think is so far? And again going back to  
20 Mr. Silberg's World War II movies.

21 COL. HORSTMAN: That is a great  
22 question.

23 JUDGE FARRAR: I can usually give a hand  
24 single to my wing man in the movies.

25 COL. HORSTMAN: It's for self defense,

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1 and I'll have to explain that. You want your wing  
2 man as far away as he can be, but still see you.  
3 So all you want to see -- if you remember that  
4 exhibit with the F-16, you want to see a dark  
5 shape. You don't want to be able to see through  
6 the canopy, but you want to be able to see that  
7 there's a canopy there. That turns out to be a  
8 mile and a half, just as if there's a reference  
9 point. The reason you choose a mile to a mile and  
10 a half is because there's a leader and a wing man  
11 in this case, and this is how I do it in the  
12 afternoon, and I'm going to explain in a minute how  
13 I do it in the morning, because it's different. In  
14 the afternoon, my wing man is on my right because  
15 the sun is over there and he can look at me. His  
16 responsibility is three primary responsibilities;  
17 don't hit the ground, fly off of your leader and  
18 check your leader 6:00. And at a mile and a half  
19 to two miles, that gives me, as a wing man at this  
20 point, the ability to look over my left shoulder  
21 and clear the flight path for an attacking bandit  
22 behind my leader. And it gives him the ability to  
23 do the same thing for me. I can't do that as well  
24 if I'm a half mile apart. If someone attacks my  
25 leader at a mile and a half apart, I cannot defend

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1 him.

2 JUDGE FARRAR: At half a mile apart?

3 COL. HORSTMAN: At a half a mile. If  
4 I'm two miles adjacent to my leader and someone  
5 attacks him, with the turn rate radius of the F-16,  
6 I can put my nose on him and shoot the attacker  
7 before he has an opportunity to shoot the leader.  
8 So it is a defensive position practiced all day  
9 every day except when you're in a radar pattern to  
10 land basically.

11 So that's what I would do in the  
12 afternoon. In the morning, I would want my wing  
13 man up sun. I don't want him to have to stare in  
14 the sun to find me. So it's different morning and  
15 afternoon. As a leader, my navigation is based  
16 directly on that hill that we've talked about. The  
17 6,048 foot hill. My wing man has no navigation  
18 because his navigation, when I come towards that  
19 hill, is pointing two miles off to his left. He  
20 has no course information, other than he needs to  
21 be to the right of our course line. Okay? So as  
22 we progress -- let's just say from that turn point  
23 there, we go as Colonel Fly described, down to the  
24 neck of Skull Valley. Very common. At the north  
25 end here --

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1 JUDGE FARRAR: Now, if you did that, how  
2 far west of that knoll would you, as the leader,  
3 have entered in the --

4 MR. SILBERG: Morning?

5 JUDGE FARRAR: -- in the morning?

6 COL. HORSTMAN: In the tack formation  
7 position. My wing man is inexperienced and doesn't  
8 have the same level of -- I mean he's just less  
9 experienced and not as good. So I would attempt to  
10 fly two miles to the right of the 6,048 foot knoll  
11 as a leader in the morning. Okay?

12 JUDGE FARRAR: And where is the wing  
13 man?

14 COL. HORSTMAN: I'm going to try to fly  
15 him directly over because now I may give him an  
16 opportunity to use his navigation. But I don't  
17 have specific navigation tools right now. I just  
18 know that I'm right, and since I'm more  
19 experienced, then it's okay.

20 JUDGE FARRAR: Wait, I thought you were  
21 flying at 4500 feet at this point? 3,000 to 4500.

22 COL. HORSTMAN: When you enter here, if  
23 you're in the Sevier B, you're about 3,000 to  
24 4,000 -- it could be up to 9500 to stay in the  
25 Sevier B MOA. So that 3,000 to 4,000 feet, that's

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1 a very normal altitude.

2 JUDGE FARRAR: Above what?

3 COL. HORSTMAN: Above ground level.

4 JUDGE FARRAR: Above ground level.

5 COL. HORSTMAN: Yeah, you're 3,000 to  
6 4,000 feet above the ground.

7 JUDGE FARRAR: That's 6048 is how much  
8 higher than the valley floor?

9 COL. HORSTMAN: It's about 1500 feet.

10 JUDGE FARRAR: Okay.

11 COL. HORSTMAN: So it would be 1500 to  
12 2500 below the aircraft that flies over it.

13 JUDGE FARRAR: You saw the thrust of my  
14 question?

15 COL. HORSTMAN: Yes, sir, I did. Are  
16 you going to hit it? No. At the AGL, if I flew at  
17 3,000 AGL here, I would be at 14,000 MSL. So the  
18 geography is really critical here.

19 So let's assume --

20 MR. GAUKLER: And you were pointing to  
21 the mountains at that point?

22 COL. HORSTMAN: The Stansbury, yes,  
23 thank you.

24 MR. GAUKLER: Peak of the mountains.

25 COL. HORSTMAN: So I'm a fighter pilot,

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1 and the trick is to talk with our hands, because we  
2 don't have the same oratory skills as our general  
3 officer friends.

4 So we're flying down this valley and I'm  
5 the leader now, it's in the afternoon and my wing  
6 man is on the right. We're going to make a slight  
7 check turn to the left, call it 30 degrees. Very  
8 administrative in nature, just to align ourselves  
9 with the next steer point, as Colonel Fly said.  
10 The next thing that I'm going to do after I see  
11 that we're on course, is check my wing man 6:00.  
12 Once I've done that, I will do the fence check and  
13 all those kinds of administrative activities.

14 MR. SOPER: What is the 6:00 and the  
15 fence check?

16 COL. HORSTMAN: The 6:00 position is I'm  
17 going to look behind my wing man to make sure that  
18 there's no bad-guy bandits rolling in on him, as a  
19 defensive measure. The fence check, as Colonel Fly  
20 discussed, it's when you cross that -- we call it a  
21 fence, you want to change your electronic  
22 emissions. You're presuming you're crossing a  
23 political border from good guy land to bad guy  
24 land. And there are about four or five -- quite  
25 honestly, they're pretty trivial things, in

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1 training. In combat if you avoid one, they might  
2 be really significant. So you practice doing them  
3 as part of the training activity.

4 So it's going to take 30 to 45, 60  
5 seconds to get all those activities accomplished,  
6 which means I'm going to go approximately five to  
7 seven miles down track. Then I'm going to take my  
8 formation at two miles apart and do an in-place 90  
9 right G warm-up. And then we go now, we go  
10 (indicating), we do a hard turn, 90 degrees. My  
11 wing man is now two miles directly in front of me.  
12 Okay?

13 JUDGE FARRAR: All right.

14 COL. HORSTMAN: I cannot do this to the  
15 east because I will hit the mountain. So I'm going  
16 towards the west.

17 JUDGE FARRAR: Right.

18 JUDGE LAM: Where would you be relative  
19 to the PFS site when you're making that turn?

20 COL. HORSTMAN: Can I get back and draw  
21 that here once I've done my hands?

22 JUDGE LAM: Sure.

23 COL. HORSTMAN: Thank you. So he's two  
24 miles in front of me. I will do a systems check to  
25 see that my air-to-air missiles are actually

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1 tracking him. And I'm going to accelerate back to  
2 my original airspeed that I entered the turn with.  
3 I entered the turn probably at 425 to 450. I  
4 exited at probably -- it depends on how hard your  
5 turn is. 350 to 400. I want to get back that same  
6 amount of energy and that activity, the  
7 accelerating and aiming my missile at my wing man,  
8 it's a training infrared missile, I want to know  
9 that it's tracking his engine heat. We will then  
10 do an in-place 90 right turn back to the south  
11 basically towards the neck of Skull Valley.

12 JUDGE FARRAR: 90 left?

13 COL. HORSTMAN: Yeah, we do a 90 right  
14 and a 90 left. If you did another 90 right, you'd  
15 be late.

16 Okay. So where does that activity  
17 happen in Skull Valley? About a minute, as I  
18 described, past the 6,048 foot knoll, which is at  
19 this case, 420 at seven nautical miles. So seven  
20 nautical miles here is -- Ron, help me out. It's  
21 about right here. I mean I know that just because  
22 I do this all the time. So it's about right here.

23 JUDGE FARRAR: Right here being where --

24 COL. HORSTMAN: Seven miles south of the  
25 6,048 peak.

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1 JUDGE FARRAR: And for the record,  
2 that's where the dash diagonal line happens to  
3 cross the eastern -- I'm sorry, western edge of the  
4 Stansbury Mountains.

5 MR. SOPER: Would it be east of the  
6 knoll or south of the knoll are you talking about?

7 COL. HORSTMAN: You're going to be on  
8 this map approximately one inch northeast of this  
9 square depiction of a ranch.

10 JUDGE LAM: And where is the PFS site?

11 JUDGE FARRAR: The little X.

12 COL. HORSTMAN: I'm using this map for  
13 mileage because the hash marks aren't on here. So  
14 what I just described is we fly from this knoll  
15 down to about an inch northeast of the ranch. And  
16 we do an in-place 90 right turn. And that turn  
17 takes -- your turn radius is at four Gs, call it a  
18 mile. So you're going to go down one more mile and  
19 be heading directly towards the PFS site for 60  
20 seconds -- 45 to 60 seconds and then do another  
21 turn back to the south.

22 So what I've just described is no one is  
23 pointing at the PFS site, we're both pointing  
24 directly at the PFS site, no one is pointed at the  
25 PFS site. At no time in here does my young,

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1 inexperienced wing man have any idea where we are  
2 navigationally. His responsibility is to fly off  
3 with me. He has a primarily responsibility to do  
4 that, a secondary responsibility of navigation.  
5 The flight leads primary responsible is navigation.

6 JUDGE LAM: Now, Colonel, do you have to  
7 do that maneuver at that location you just  
8 described? Could you have done it earlier in the  
9 Salt Lake or over the flats?

10 COL. HORSTMAN: No, you -- it's  
11 inappropriate to do it before you get to the Skull  
12 Valley. If I'm late, I will delay that until 40  
13 miles later. So it's completely flight-lead  
14 dependent. And in my experience, in my hundred or  
15 so flights down Skull Valley in an F-16, we,  
16 generally speaking, if we were on time, did them  
17 right there.

18 JUDGE FARRAR: Okay, now, you don't have  
19 to do that navigationally, you're doing it as a G  
20 practice?

21 COL. HORSTMAN: At a G practice to make  
22 sure you don't go to sleep. If you delay any  
23 longer than a minute past that ranch -- I mean, I'm  
24 sorry, past the knoll, you don't have enough real  
25 estate to the west. I have done it from entering

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1 this area all the way down to 40 miles south -- I  
2 mean way down there.

3 JUDGE FARRAR: Now, if you did it just  
4 at the point you said in your first demonstration,  
5 where for a minute, your wing man is headed toward  
6 the site, proposed site, and in the minute, you go  
7 seven miles, show me seven miles on the --

8 COL. HORSTMAN: Right to the buffer that  
9 I try to use.

10 JUDGE FARRAR: In other words, in that  
11 minute, he's going for seven miles at the site,  
12 which gets him fairly close to it?

13 COL. HORSTMAN: Yes.

14 MR. SILBERG: Your question is seven  
15 miles from here takes you where?

16 JUDGE FARRAR: No. When he comes down  
17 from there --

18 COL. HORSTMAN: The leader is on the  
19 east side.

20 JUDGE FARRAR: Right.

21 COL. HORSTMAN: Sir, it's right over the  
22 site. That's what you're asking.

23 JUDGE FARRAR: In other words, so the  
24 wing man is coming, his seven -- his minute that  
25 he's headed towards the site gets him to the site

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1 and then you do your hard left turn back to the  
2 south?

3 COL. HORSTMAN: That's correct. Now, if  
4 I am the wing man --

5 JUDGE FARRAR: But that's one way you  
6 might do it out of many ways?

7 COL. HORSTMAN: That's correct. And in  
8 my experience, that's the predominant thing. There  
9 are times --

10 JUDGE FARRAR: Now, let me ask again, if  
11 you've planned that back home or suddenly, you  
12 spring that on the wing man?

13 COL. HORSTMAN: You brief when you're  
14 going to try to do every activity, so that the wing  
15 man will know what to expect when. If he's in the  
16 middle of a fuel check and you say that, he's got  
17 to look up and get reoriented and it's confusing  
18 and you do that.

19 JUDGE FARRAR: Which might be good  
20 practice for him?

21 COL. HORSTMAN: Yeah, it is good  
22 practice for him.

23 JUDGE LAM: But, Colonel, it's still  
24 unclear to me why you couldn't have done that  
25 exercise earlier. You mentioned something about

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1 inappropriate.

2 COL. HORSTMAN: Right.

3 JUDGE LAM: Why it it inappropriate?

4 COL. HORSTMAN: When you're flying out  
5 over the Great Salt Lake, you're in radar control  
6 from Salt Lake approach departure radar. You are  
7 required to be a certain amount of mileage from  
8 each other. When you take off, you may take off in  
9 formation, but typically, you take off 10 to 20  
10 seconds, depending on your ordnance, behind your  
11 leader. You would catch up on the departure. You  
12 have to fly -- you don't have to. Salt Lake  
13 desires that you fly the departure at 350 knots.  
14 You cannot do this maneuver unless you have 425 or  
15 more knots. And that number is dependent upon  
16 external fuel tanks. You could do it at 400 knots  
17 if you didn't have any external fuel tanks. So you  
18 don't have the room over the Great Salt Lake nor  
19 the energy. And remember, this is all completely  
20 administrative organizing your flight till you get  
21 down in this area.

22 If you're flying over Tooele valley,  
23 just as an example, why would you do an aggressive  
24 maneuver in an airplane and point it some place  
25 different when you can do that activity in a

1 military operating area which is where it's  
2 designed to be done. It's safer for the general  
3 flying population.

4 If I am on the right side, my wing man,  
5 in our G warm-up turn to the right, has already  
6 done his weapons check on me on the departure. So  
7 I will then, as a leader, try to start this G  
8 warm-up at 450 knots, do our 90 degree right turn,  
9 and maybe 10 to 15 seconds later, turn back. So  
10 that there was an operational reason for that  
11 almost a minute. It can be done in as little as 10  
12 seconds, potentially less, depending on a variety  
13 of things. If you enter in the dead center of  
14 Skull Valley and you do a 90 right, we have real  
15 estate problems. So the predominant route of  
16 flight for -- in the afternoon, for the leader, is  
17 tracking to the east, because you want the ability  
18 to do your G warm-up exercise inside of Skull  
19 Valley. Because it's an opportunity you don't want  
20 to miss.

21 JUDGE FARRAR: Now, Mr. Silberg, would  
22 you put the bigger map back up. When you talked in  
23 response to Judge Lam's question about not doing it  
24 earlier, that area is to the west of the southern  
25 tip of the lake, that does not have any black

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1 outlines on it, your private pilots and other  
2 people can be in that --

3 COL. HORSTMAN: Everybody from the west  
4 coast flying to Salt Lake -- not everybody. 95  
5 percent fly down the interstate.

6 JUDGE FARRAR: Because --

7 COL. HORSTMAN: Because it's a  
8 navigation aid. It's easy.

9 JUDGE FARRAR: It's a navigation aid,  
10 and you guys aren't doing anything in there.

11 COL. HORSTMAN: And if you look right  
12 here at the Salt Lake Airport, they have a radio  
13 navigation aid that Colonel Fly discussed. There's  
14 another one at Wendover, and a direct line is right  
15 down the interstate. So they have visual aids on a  
16 clear day, and they have radio navigation aids on a  
17 cloudy day. And trying to mix up fighter activity  
18 with general population Cessnas is a really  
19 dangerous thing.

20 JUDGE FARRAR: Let me suggest, this has  
21 been a good tutorial for us to understand the  
22 questions that we thought -- some of the questions  
23 that were asked and some that were coming. So why  
24 don't we resume with Mr. Gaukler's cross. But at  
25 any point, you feel we -- either of you feel we

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1 would be benefited by showing us what's happening,  
2 please do so.

3 Go ahead, Mr. Gaukler. That was a long  
4 but necessary interruption, and we learned a lot of  
5 things, that while they may be common knowledge to  
6 you and the different witnesses, are things we need  
7 to be aware of. In particular, I think the  
8 information about why the one and a half to two  
9 miles was helpful to understand. Military, why the  
10 flights are constructed in a certain manner.

11 Q. (By Mr. Gaukler) I think I understood  
12 what you said. Exactly when you would do G  
13 awareness turns or do other type of activities is  
14 flight dependent -- flight need dependent?

15 A. Yes, it is and each flight lead has the  
16 opportunity based on that set of circumstances --  
17 and the weather, the clouds play a role, your  
18 timing plays a roll, a variety of things play a  
19 role. To each flight lead they may be different.

20 Q. And the purpose of the training  
21 exercises play a role, also?

22 A. No, sir, it does not. You are required  
23 on every flight that is not just instrument flying  
24 conditions, so basically any flight you're going to  
25 go under the UTTR, you are required to perform a G

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1 warm-up exercise before you enter.

2 Q. Going back to the question of the  
3 altitude that you fly, is a thousand feet above AGL  
4 north of Dugway as we just went over?

5 A. Yes, sir.

6 Q. And if you look at your testimony -- so  
7 therefore, when you say you flew at five or 600  
8 feet above ground level through Skull Valley,  
9 that's not the part of the Skull Valley that we're  
10 talking about where the PFS would be located?

11 A. No, sir, it's distinctly south of that  
12 point.

13 Q. Okay. Do you say that in your  
14 testimony?

15 A. I don't believe I was asked.

16 Q. Now, I believe you talked in your  
17 depositions about how high you may fly in the area  
18 of Skull Valley?

19 A. Yes, sir.

20 Q. And if you kind of would go through for  
21 the Board, you have Sevier B which goes up to 9500  
22 mean sea level; correct?

23 A. Yes.

24 Q. And I think Sevier D goes up to --

25 A. 17,999.9 feet, I think.

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1 Q. So essentially, 18,000?

2 A. No, sir. And I'm saying that because  
3 there is no 18,000 feet. It's flight level 1-8-0.  
4 That puts everybody in the upper altitude airspace  
5 on a common altimeter setting. If the altimeter  
6 setting at Hill Air Force Base based on barometric  
7 measure is the normal standard minus -- let's say  
8 it's 29.85. That's what you would set in your  
9 altimeter. You might set 29.95 if you took off  
10 from a different location such as Wendover. Those  
11 airplanes, altimeter read a hundred feet  
12 differently at 17,000 feet. At flight level 1-8-0,  
13 everyone adjusts their altimeter to 29.92, which is  
14 standard data plane, so that everybody flying in  
15 the control airspace has to report the same  
16 altitude reference point.

17 Q. Now, at above 18,000 or 17,999.99 MSL,  
18 you enter what is called positively controlled  
19 airspace?

20 A. Yes, sir. The FAA has reserved that  
21 space for aircraft operating under an IFR  
22 clearance. An IFR clearance -- there are a number  
23 of requirements for that, but essentially, the FAA  
24 will control your aircraft when you're above flight  
25 level 1-8-0 until you enter the restricted airspace

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1 when that control will be handed off to clover  
2 control.

3 Q. And by IFR, you're talking about  
4 instrument flight rule; is that correct?

5 A. That's correct yes.

6 Q. As opposed to a visual flight rule?

7 A. That's correct, also, sir. It's  
8 probably best that I can explain. There's two  
9 types of flight plans and two types of flying  
10 conditions. There's instrument in both of them.  
11 Instrument mediological conditions, which is where  
12 you actually are, and that would be in the clouds,  
13 for example, and visual, clear of clouds by a  
14 certain margin. The rules are what you have flight  
15 planned and the rules set you're operating under.

16 Q. And when your flying instrument flight  
17 rules you're under the direct control of the FAA  
18 control tower setting; correct?

19 A. Essentially, yes. For us.

20 Q. Right. You have to have a flight plan,  
21 follow that plan, et cetera; correct?

22 A. Yeah, you can make a lot of deviations  
23 and tell them, but they are required to control  
24 you. You can't just go up there and turn left  
25 without telling them.

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1 Q. So there are reasons that -- can you fly  
2 above -- I think you said you could fly above  
3 18,000 MSL?

4 A. Well, sure the aircraft is able to.  
5 It's just a matter of whether you have clearance  
6 into it. Let me give you a brief example. I've  
7 flown at flight level 2-0-0 in a Boeing 737 above  
8 Skull Valley. It's not a problem because the FAA  
9 is controlling that activity.

10 Q. Now, it would be correct to say that  
11 flying above 18,000 MSL -- the 18,000 MSL, that's  
12 the top of Sevier D, or 18,000 minus some small  
13 fraction?

14 A. Yes, that's correct.

15 Q. Sevier D; correct?

16 A. Unfortunately, it depends on the  
17 temperature and the pressure, yes, sir.

18 Q. So up to that point, Sevier D goes up to  
19 that point?

20 A. Yes, sir.

21 Q. Okay. And because of the need to have a  
22 flight plan with the FAA and other things, it's so  
23 unusual -- not unusual for pilots to fly above  
24 18,000 MSL; correct?

25 A. Not for those reasons, sir. You have a

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1 flight plan filed, you just tell the FAA you want  
2 to go up to flight level 2-0-0. They would -- if  
3 the air space was clear of other aircraft, they  
4 would allow you to do that. There are very few  
5 reasons why someone going to the Utah Test &  
6 Training Range would fly down Skull Valley at  
7 flight level 2-0-0, although it can be done.

8 Q. So you would agree that it's unusual for  
9 somebody to do it?

10 A. Yes, it is unusual.

11 Q. Going back to question 25.

12 A. On?

13 Q. In your testimony.

14 A. Okay.

15 Q. And there you say, "F-16s most commonly  
16 fly through Skull Valley at 3,000 feet AGL at  
17 Sevier B, but may fly in or above the Sevier B up  
18 to 18,000 feet AGL." Is that meant to be MSL?

19 A. It is, sorry.

20 Q. So you would change that to MSL there?

21 A. Yes, I would.

22 Q. Okay. And then you go down to the last  
23 sentence on that page, "Based on my personal  
24 experience, F-16s fly over Skull Valley altitudes  
25 ranging between 500 to 18,000 feet AGL." That

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1 should be MSL again?

2 A. Yes. 500 feet AGL to 18,000 feet MSL.

3 Q. MSL, okay. That 500 feet again is south  
4 of Dugway; correct?

5 A. If we continue to read, it says, "on the  
6 flights below a thousand feet are now limited." I  
7 have flown many years ago at 500 feet all the way  
8 through Skull Valley. There's a limit on that now.  
9 As we heard the testimony yesterday morning,  
10 Mr. Bernard said he flew down there much lower.  
11 And you have to understand that back in the mid  
12 '80's to early '90's, one of the tactics that the  
13 Air Force used for self defense was to fly at  
14 extremely low altitudes. So the more practice the  
15 better. Since I returned to Hill in --

16 Q. When was that, sir?

17 A. I don't know when the change-over was,  
18 but for the last five years, you have not been able  
19 to fly below a thousand feet AGL over the northern  
20 part of Skull Valley, and we defined that before by  
21 essentially east of Dugway.

22 Q. I'd like to turn to question and answer  
23 34 of your testimony. And basically, right now,  
24 I'm going to turn to the topic of crash rates for  
25 the F-16 aircraft which begins with your question

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1 and answer 32 on page 12. And it's your position,  
2 as I understand it, there's a bathtub effect that  
3 you have a high initial failure rate for an  
4 airplane, and then you kind of have a level effect  
5 through the middle and then somewhere towards the  
6 end of the life, you begin to get an uprising in  
7 the failure rate; is that correct?

8 A. Yes, sir, that is correct.

9 Q. And you reference -- and you claim the  
10 F-16 will have this type of bathtub effect;  
11 correct?

12 A. Yes, sir, I believe it will.

13 Q. Now, in your question and answer 34, you  
14 reference specifically State Exhibit 52, the graph  
15 showing the bathtub effect for the F-16. It's your  
16 position that graph shows the bathtub effect for  
17 the F-16?

18 A. Yes.

19 Q. I'd like to turn to that graph. Do you  
20 have what's --

21 A. I don't have a clue.

22 MR. SOPER: I think we have a newer one  
23 with one more year on it, Mr. Gaukler, if you want  
24 to use that.

25 MR. GAUKLER: I don't have that one

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1 handy, I apologize.

2 MR. SOPER: It's in evidence.

3 Q. (By Mr. Gaukler) Let's look at this one  
4 because this is one that you had in your testimony.

5 A. That's fine.

6 MR. SOPER: Oh, it's 154.

7 Q. (By Mr. Gaukler) We'll use the one  
8 that's 52 here. And this shows class A failure  
9 rates through fiscal year 2000; correct?

10 A. Correct.

11 Q. And I see what you claim -- you claim  
12 these high rates in the first four or five years  
13 are part of the bathtub failure -- for the first  
14 part of the bathtub in the initial rate of the  
15 aircraft; correct?

16 A. Yes.

17 Q. And I see how you come across here, and  
18 I see what appear to be, say, beginning in calendar  
19 year '84, '85, what appear to be relatively level  
20 rates all the way across to fiscal year 2000, would  
21 you agree?

22 A. I would agree. Based on this graph,  
23 yes.

24 Q. And this graph doesn't show, does it,  
25 any bathtub on the end of the F-16 life, at least

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1 at this point in time; is that correct?

2 A. At this point in time, it does not,  
3 that's correct.

4 Q. Now, do you recall in your December  
5 deposition, we talked about bathtub curves and  
6 bathtub effects at some length?

7 A. Vaguely, yes.

8 Q. And do you recall that -- well, first of  
9 all, the F-16 has been built in a series of models;  
10 isn't that correct, the F-16A, F-16B, F-16C?

11 A. Well, sort of. The A and the B are the  
12 same essential model. It's basically a two-seater.  
13 There's an A and there's a C and the various subset  
14 blocks of those.

15 Q. And the F-16A is towards -- it's  
16 essentially being phased out; is that correct? It  
17 was the first model of the F-16 and the F-16As that  
18 were built are essentially --

19 A. It's out of the active duty. It's being  
20 flown by the Guard and Reserve.

21 Q. Now, I'd like to have you turn to page  
22 217 of the December 11 deposition.

23 A. Okay.

24 JUDGE FARRAR: Did you say 215,  
25 Mr. Gaukler?

1 MR. GAUKLER: I said 217, I meant to  
2 say.

3 JUDGE FARRAR: I just didn't hear you.  
4 Where do you want me?

5 Q. (By Mr. Gaukler) And do you remember at  
6 that deposition saying that you were going to be  
7 doing some further work on the F-16A to try to show  
8 the bathtub effect?

9 A. Yes.

10 Q. And that's what you say here at page  
11 217; correct?

12 A. That's what I say there, yes.

13 Q. And then when Ms. Marco asked you on  
14 cross-examination, again you repeated your intent  
15 to do some work with respect to the F-16A?

16 MR. SOPER: Well, I object. I'd like  
17 the answer read, not your characterization of it,  
18 Mr. Gaukler.

19 MR. GAUKLER: All right, very good.

20 Q. (By Mr. Gaukler) Turn to page 235.

21 MR. SOPER: Well, the first one first  
22 that you mentioned.

23 MR. GAUKLER: Okay.

24 Q. (By Mr. Gaukler) Basically my question  
25 to you on page 217 is, "And is there any further

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1 work that you plan to do regarding your testimony  
2 in preparation for your testimony?" And the topic  
3 you were talking about was the bathtub effect. And  
4 would you read your answer, please.

5 A. "I think we'll probably put -- ask for  
6 a single block of airplanes, if you want to say the  
7 F-16A model, and we'll ask for the F-16A model  
8 crash rates from introduction to, because they are  
9 all about gone, been retired. We are going to ask  
10 for those from the Air Force so we can show  
11 historically that, in fact, there is a higher crash  
12 rate at the end."

13 Q. And if you'd turn to page 235.

14 A. Okay.

15 Q. And there you see that Ms. Marco is  
16 asking you about your position that you're going to  
17 see a bathtub effect at the end of life?

18 A. Not on 255.

19 MR. SOPER: I don't know where you're  
20 referring to. Can you tell me a question number?

21 Q. (By Mr. Gaukler) Basically, it's  
22 question 236, and you have to go back to look at  
23 question -- begins on the end of 235, on 235, line  
24 14, Ms. Marco is asking about the beginning --  
25 bathtub at the beginning of life, and in terms of

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1 do you mean that the first five or 10 years would  
2 be part of the bathtub in the beginning of life?  
3 Do you agree that's what she's asking you there?  
4 And I want to focus on the end of life.

5 A. I know, and I want to look at the  
6 previous question to make sure because it's kind of  
7 a vague question.

8 Q. Yes.

9 A. I'm not sure, but I believe so. I  
10 believe that's what she's talking about. I  
11 can't --

12 Q. And then on question 36, she asks, the  
13 last part of it, "And the end of life, is that the  
14 same?" And can you read your answer to that.

15 A. "Yeah. As the F-16 gets older before  
16 its retirement, the accident rates, we believe will  
17 continue to rise and then the new airplane that  
18 comes in to replace it will have a high accident  
19 rate and then it goes down."

20 Q. And then she asks you, "Can you define  
21 that in terms of years?" And would you read the  
22 first paragraph of your answer.

23 A. "I wish I could. And I'll do some work  
24 to see if we can clarify it better with the F-16A  
25 because those are essentially out of the

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1 inventory."

2 Q. Have you done any additional work with  
3 respect to the F-16A to analyze its crash rate at  
4 the end of life?

5 A. I'd like to defer that to Mr. Resnikoff  
6 if I could.

7 Q. Do you know if Dr. Resnikoff has done  
8 any work?

9 A. I'd like to defer that.

10 Q. Have you done any work?

11 A. We've had a number of discussions about  
12 it.

13 Q. Have you produced any work yourself in  
14 terms of analysis of the failure rate of F-16As  
15 towards the end of their life?

16 A. I haven't published any articles. I've  
17 had discussions, so I -- have I done any work? I'm  
18 not quite sure, other than having discussions. I  
19 have not personally built a chart.

20 Q. Are you aware of any work that's been  
21 done that demonstrates, in your view, a bathtub  
22 effect --

23 A. Yes, I am.

24 Q. -- end of life? And what work is that?

25 A. I'm going to refer to Dr. Resnikoff

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1 because he has that work. I can't answer the  
2 question.

3 Q. Do you know about that work?

4 JUDGE FARRAR: Colonel Horstman, it  
5 seems like you're not quite answering the question.  
6 It sounds like you're almost saying you're aware of  
7 the work, and, in fact, the work you're aware of is  
8 Dr. Resnikoff's and you'll defer to him to talk  
9 about the work. But it sounds like you're saying  
10 you'll defer to him to say whether there is work,  
11 and I don't think that's what you mean to say. You  
12 will defer to him --

13 COL. HORSTMAN: I misunderstood the  
14 question.

15 JUDGE FARRAR: Yeah, you'll defer to him  
16 about the merits of the work, but his is the work  
17 you're aware of?

18 COL. HORSTMAN: Yes, sir.

19 MR. SOPER: Could I be of assistance?  
20 Because we're not in a panel here, Dr. Resnikoff  
21 does plan to present an exhibit showing the upward  
22 trend at the end of the life -- actually, it's for  
23 all F-16s, and Lt. Colonel Horstman isn't in on  
24 that, and so he's trying to anticipate. He just  
25 doesn't know. If that's any help.

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1 JUDGE FARRAR: Mr. Gaukler, does this  
2 get you the answer you're looking for?

3 Q. (By Mr. Gaukler) Well, Lt. Colonel  
4 Horstman, when you were answering these questions,  
5 you were focusing -- your thought was to take the  
6 F-16A as a separate sub model and pilot's failure  
7 rate as a function of time over its life to see if  
8 with respect to just the F-16A, you would get a  
9 bathtub effect; is that correct?

10 A. I'm trying to get the whole question  
11 here.

12 Q. Where I understand your two answers  
13 here, you had intended to get the subset of data  
14 just for the F-16A, not other models of the F-16?

15 A. That's correct.

16 Q. And just plot that data, failure rate  
17 over the life of the F-16A or do some type of  
18 analysis of the failure rate of the life of the  
19 F-16 to demonstrate, in your view, the bathtub  
20 effect?

21 A. Yes, sir. As we said, we're going to  
22 try to get different airplanes, but the F-16A,  
23 because it's reaching the end, would be easier. We  
24 try to do that for lots of airplanes.

25 Q. And did you do any analysis yourself

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1 with respect to just the F-16A data analyzing  
2 whether it had a bathtub effect at its end of life?

3 A. I have not done that work.

4 Q. Did you collect the data for the F-16A  
5 that could be used in analyzing whether the F-16A  
6 has a bathtub effect at its end of life?

7 A. I have not personally collected that  
8 data.

9 Q. So even though what you said in the  
10 deposition, you did not collect that data yourself?  
11 You did not collect that data? Excuse me, you have  
12 not collected any data since the deposition on the  
13 F-16A?

14 A. I personally have not collected any  
15 data.

16 Q. Do you know whether somebody else for  
17 the State has collected data on just the F-16A to  
18 evaluate whether it has a bathtub effect at end of  
19 life?

20 A. I'm going to defer to Dr. Resnikoff.

21 Q. Do you know whether he has collected any  
22 data just for the F-16A? I'm asking you whether  
23 you know.

24 A. I don't know.

25 Q. Do you know whether Dr. Resnikoff has

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1 done any analysis of just the F-16A as you had  
2 contemplated in your deposition, with respect to  
3 just F-16A data to demonstrate a bathtub effect at  
4 its end of life?

5 A. I'm not sure. I've seen the graphs and  
6 the charts, and I'm not sure if there's one that  
7 says F-16A or block 10 or anything else.

8 Q. So you don't know, is the answer?

9 A. That's correct.

10 Q. Did you discuss with Dr. Resnikoff  
11 whether you should do an analysis just using the  
12 F-16A data?

13 A. I discussed it with counsel.

14 Q. Did you discuss it with Dr. Resnikoff at  
15 all?

16 A. I've had a number of discussions with  
17 Dr. Resnikoff. Whether I specifically asked him  
18 with respect to the F-16A, I don't recall.

19 Q. I'd like to go on --

20 JUDGE FARRAR: Mr. Gaukler, are you  
21 headed to a new subject?

22 MR. GAUKLER: I have a few more  
23 questions left on crash rates. Let me confer with  
24 my co-counsel and then after that, I'll be heading  
25 on to a new subject.

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1 JUDGE FARRAR: Okay. And everyone tell  
2 me if this question is inappropriate. On page 236  
3 of that deposition we were just looking at, there's  
4 an answer starting at line 14 that goes for four  
5 lines in our copy, and then there's another answer  
6 starting with the -- or there's something starting  
7 with the word no at line 18. It looks like it's an  
8 answer to another question. I don't know to what  
9 extent you're allowed to ask if a transcript that  
10 hasn't been formally corrected is correctable. But  
11 Ms. Marco, do you recall asking a question --

12 MS. MARCO: I don't recall asking a  
13 question between the two. I just don't remember  
14 that.

15 JUDGE FARRAR: Because that second  
16 paragraph doesn't seem to be an afterthought to the  
17 first one. It seems like it would be in answer to  
18 another question, which may not be important and  
19 maybe we're not allowed to tamper with the  
20 transcript if you all haven't corrected it. It may  
21 not matter.

22 MR. GAUKLER: And since we haven't read  
23 it into the record.

24 JUDGE FARRAR: No, but if it's a follow  
25 on to the first -- in other words, in one

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1 paragraph, he talks about the F-16A and then the  
2 next he talks about the F-16, and since you're  
3 drawing a distinction between those, I'm looking  
4 for the missing question. But Ms. Marco, we  
5 talked --

6 MS. MARCO: It could be consistent.

7 JUDGE FARRAR: Dr. Campe and I talked  
8 yesterday about remembering things from the past.  
9 You're younger than Dr. Campe and I, and this was  
10 only two years ago.

11 MS. MARCO: Well, I don't remember  
12 asking a separate question between these. But it  
13 could be that they're both consistent.

14 MR. GAULKER: It could be they're just  
15 talking about he doesn't know when the F-16 is  
16 going to retire.

17 JUDGE FARRAR: Well, if we can't solve  
18 the problem, we'll just leave it as is. Thank you,  
19 Ms. Marco.

20 Q. (By Mr. Gaukler) Looking at the  
21 question and answer -- looking at question and  
22 answer 33, the question is, "What factors should be  
23 considered in predicting future F-16 crash rates  
24 for use in evaluating aircraft crash impacts to the  
25 proposed PFS facility?" And your bottom line

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1 conclusion after some analysis is that any  
2 estimate -- reading the last sentence. "Any  
3 estimate of future crash rates must therefore  
4 approximate the entire surface life of the F-16 as  
5 the best predictor of the next 20 years of aircraft  
6 crashes in Skull Valley."

7 MR. SOPER: I object to the form of the  
8 question as it's his bottom line conclusion. It's  
9 a three sentence answer, and I think all three  
10 sentences ought to be read as his conclusion to the  
11 answer.

12 Q. (By Mr. Gaukler) Do you agree that's  
13 your bottom line conclusion that you reach in that  
14 answer?

15 JUDGE FARRAR: Off the record.

16 (Board conferred off the record.)

17 JUDGE FARRAR: And would you read back  
18 the question, please.

19 (Question Read.)

20 JUDGE FARRAR: Mr. Soper, we'll allow  
21 the question, but the witness can explain his  
22 answer and then you'll have redirect, of course, if  
23 you need to have an elaboration.

24 Q. (By Mr. Gaukler) You can go ahead.

25 A. Thanks. In my professional view, when

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1 you're trying to predict a future crash rate, you  
2 have to use as much historical information as is  
3 available. As General Cole so accurately  
4 described, we do a better job building airplanes  
5 now. And yet in the case of the V-22 Osprey,  
6 virtually all of them have crashed with people on  
7 board. Operational airplanes. So I'm not sure  
8 that that always holds true. It's a nice thing to  
9 believe and in some cases it will be true.

10 When you look at a fighter at Hill Air  
11 Force Base and its potential replacement, it's been  
12 bantered around, although we don't know because  
13 those basing decisions have been made. I think  
14 it's prudent to use a crash rate for the life of  
15 the airplane if it's going to be there for the  
16 whole time. If the F-16's been around 25 years,  
17 what better indicator could we possibly have of a  
18 crash rate? In a given year, we may fly lots and  
19 lots of flying hours over Iraq. Very, very benign  
20 combat mission. And in another year, we may fly --  
21 and I know. It is, sorry. And in another year,  
22 our training may be suited towards less flying  
23 hours because they're higher performance and you're  
24 going to see variations. You're going to see lots  
25 of variations as you do in the chart.

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1                   So to pick five years, 10 years, 11  
2 years, 37 years, the life of the airplane, of the  
3 F-16 has an established accident rate, and when you  
4 calculate something like that, the first couple of  
5 years, those rates are extremely high. But because  
6 of the hours, they're really minimized in the  
7 overall calculation. So why would you not choose  
8 to use the best available information we have, and  
9 that is, the newest fighter airplane in the world  
10 that's been mass produced for a number of years.  
11 We have a good baseline on those aircraft, and as  
12 I've said, in the middle of the life of the  
13 aircraft, you're going to have potentially the  
14 lowest accident rates.

15               Q.       Now, first of all, Lt. Colonel Horstman,  
16 in your declaration of January 30, 2001, you took a  
17 different position with respect to the crash rate  
18 that you use; is that correct?

19               A.       I don't recall. Can you point it to me?

20               Q.       Will you look at your deposition of  
21 January 30, 2001. Do you have that? And I would  
22 refer you to Paragraph 32.

23               A.       Which paragraph, please?

24               Q.       Paragraph 32.

25               MR. TURK: Is this the declaration?

1 MR. GAUKLER: Declaration, yes.

2 COL. HORSTMAN: Yes.

3 Q. (By Mr. Gaukler) And there you said  
4 that the fiscal year 1999 rate should be used for  
5 the crash rate of the F-16, didn't you?

6 A. I did.

7 Q. And that was a single year; correct?

8 A. It was.

9 Q. And it was the single highest year in  
10 quite some time, wasn't it? If you look at Exhibit  
11 52 -- let me bring that back to you.

12 A. I've got this one here. How did you  
13 characterize it?

14 Q. As one of the higher rates in some  
15 period of time; correct?

16 A. Slightly.

17 Q. And also referring to your question  
18 about the well-established rates, it looks like,  
19 doesn't it, that there's a well-established rate  
20 basically beginning in the mid 1980's; '89 -- '85,  
21 '89 forward; correct?

22 A. Well, this says a hundred percent  
23 variance, though. I'm not sure I would agree with  
24 that.

25 Q. You mentioned the Osprey aircraft in

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1 your answer?

2 A. I did.

3 Q. And isn't that a tilt rotor aircraft,  
4 the only one of its kind?

5 A. Yes.

6 Q. And it's an entirely new design; isn't  
7 that correct?

8 A. Every aircraft is a new design.

9 Q. Has there ever been a tilt rotor plane  
10 before?

11 A. Not to my knowledge.

12 Q. There's been jet fighters before;  
13 correct?

14 A. Well, actually --

15 Q. There's been jet fighters before?

16 A. Yes, and there's been jet fighters that  
17 have a -- not a tilt rotor but a tilt nozzle.

18 Q. This is a tilt rotor.

19 A. I understand. The concept is no  
20 different whether it's propeller or jet.

21 Q. Now, are you also aware that over the  
22 history of the United States Air Force, the crash  
23 rate has continually decreased?

24 A. Yes.

25 Q. And I'd like to have introduced a

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1 document that we discussed in your December 11,  
2 2000 deposition?

3 JUDGE FARRAR: Mr. Gaukler, that last  
4 question -- or Mr. Witness, did you interpret that  
5 to mean crash rate of all Air Force planes?

6 COL. HORSTMAN: Yes.

7 MR. GAUKLER: That's what it was  
8 intended to mean, also.

9 Q. (By Mr. Gaukler) While we're waiting  
10 for that exhibit to be passed around, are you  
11 saying there's not a big difference between tilting  
12 the rotor and tilting a nozzle? Is that what  
13 you're saying in terms of the Osprey?

14 A. Well, there's two completely different  
15 ways of looking at it. One is you're tilting a  
16 mechanical device and the other is your  
17 transitioning from vertical flight with zero  
18 airspeed to forward flight. The carrier aircraft  
19 that the Marines have flown for a number of years,  
20 operate in the same principle as the V-22 Osprey  
21 with a tilt rotor.

22 Q. Now, the F-16 doesn't have that feature,  
23 does it?

24 A. No.

25 Q. And the intended replacement, the

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1 planned replacement for the F-16, the joint strike  
2 fighter doesn't have that feature, does it?

3 A. Not the Air Force version.

4 Q. And the Air Force version to be flown  
5 out of Hill; correct?

6 A. I don't know. I mean I honestly don't  
7 know. Nor does anyone. That would be logical, but  
8 it hasn't been cited.

9 MR. GAUKLER: Okay. I thought I was  
10 done with this area, but I do have a few more  
11 questions, maybe about 15 minutes worth. Do you  
12 want to continue?

13 JUDGE FARRAR: And then after that, what  
14 would you have? In other words, then you'd start a  
15 whole new subject?

16 MR. GAUKLER: I would be off crash  
17 rates, yes.

18 JUDGE FARRAR: Why don't we -- if  
19 everyone can hold on a little bit, let's keep  
20 going. Let me just ask one clarifying question  
21 which I assumed a long time ago, but now I'm not  
22 sure I know the answer to. All these crash rates  
23 we're talking about exclude combat, or do they --

24 COL. HORSTMAN: No, they wouldn't  
25 exclude combat in the latest years. The earlier

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1 years, I wouldn't hazard a guess. I don't know  
2 that detailed about it. I mean, we're flying  
3 combat now, so it should account.

4 JUDGE FARRAR: There's a classic dumb  
5 question that the answer isn't so obvious.

6 COL. HORSTMAN: I'm sure the information  
7 is available in the room.

8 JUDGE FARRAR: Among you all at the  
9 right point, sort that out, because I've been  
10 assuming that this is non combat, because if you  
11 get shot down -- or maybe the answer is, if you get  
12 shot down, that's not --

13 MR. GAUKLER: General Cole I think can  
14 answer the question, if you want to get the answer  
15 right now.

16 JUDGE FARRAR: If you all don't mind, I  
17 know this is irregular, but if General Cole has the  
18 answer.

19 MR. SOPER: Is this the answer to combat  
20 or no combat in crash rates --

21 JUDGE FARRAR: Yeah. General Cole  
22 you're still under oath.

23 GEN. COLE: Yes, sir. The class A  
24 mishap rates do not include combat or hostile  
25 action or acts of war. But not to confuse things,

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1 there was some debate on the 11 September events,  
2 and that's in the NTSD and FAA route. But for U.S.  
3 Air Force purpose, accidental crashes are what the  
4 rates are computed on. Combat losses are not  
5 included.

6 JUDGE FARRAR: You mean on September  
7 11th, there was a debate for civilian records?

8 GEN. COLE: Yes, sir. But which way  
9 they account, hostile acts, set that aside. Air  
10 Force is purely accidents. Thank you, Your Honor.

11 MR. GAUKLER: I'd like to have this  
12 identified as PFS Exhibit -- whatever the next one  
13 is. I've lost count.

14 JUDGE FARRAR: 80 something. Off the  
15 record.

16 (EXHIBIT-82 MARKED.)

17 JUDGE FARRAR: Back on the record, we've  
18 marked for identification as applicant's Exhibit  
19 82, a document entitled U.S. Air Force History.

20 Q. (By Mr. Gaukler) This is a document  
21 that was produced by the State of Utah in  
22 discovery. You can see it by the Utah Bates  
23 numbers on the bottom, UT-45709-45710. Do you  
24 recognize this document?

25 A. Yes, sir, I do.

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1 Q. And what does this document represent?

2 A. The calendar year 1947 to fiscal year  
3 1998, U.S. Air Force crash AB destroyed fatal  
4 rates.

5 Q. And this is for all types of Air Force  
6 aircraft, is your understanding?

7 A. Yes.

8 Q. And if you just look at the rates, for  
9 example, the destroyed rate, you see it starts out  
10 15 point -- is this per hundred thousand hours,  
11 also, do you know?

12 A. I think the Air Force has done --  
13 calculated it slightly different, so I don't know  
14 the exact answer.

15 Q. So it starts out with 15.24 in calendar  
16 year 1947, for example, for a destroy rate, and in  
17 19 -- fiscal year 1998, there was 0.95 for the  
18 destroy rate?

19 A. That's correct.

20 Q. And you remember that we discussed this  
21 document in your deposition. If you turn to page  
22 -- your December 11 deposition that would be -- 79  
23 and 80.

24 A. 79 and 80?

25 Q. Yeah. Now, if you look back at PFS

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1 Exhibit 82 briefly again once you looked at that.

2 A. One second. Okay.

3 Q. You also see the general seems to  
4 decline in the class A rates, don't you, going from  
5 44.22 in 1947 down to 1.14 in fiscal year '98;  
6 correct?

7 A. I do.

8 Q. And when I showed you that document and  
9 I asked you whether you were -- look at question  
10 and answer on page 79, "And are you aware that the  
11 Air Force just announced this year -- referring to  
12 fiscal year 1999 -- that they had a lower rate  
13 yet?" And would you read your answer into the  
14 record, please.

15 A. Which one was it again?

16 Q. The question that begins at No. 13, I  
17 read that into the record. Would you read the  
18 answer in that beginning at line 16 on page 79.

19 A. "Uh-huh. And they do that typically  
20 every few years because they build better  
21 airplanes."

22 Q. So what you're saying, typically every  
23 few years, the Air Force announces a new low in its  
24 crash rates because of building better aircraft;  
25 correct?

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1 A. Yes.

2 Q. And then I went on to ask, if there's  
3 any other reasons that you could attribute the  
4 lower rate as time goes on, and I asked you that on  
5 page 80, line four, "Any other reasons you would  
6 attribute to it?" Referring to the decreasing rate  
7 over time. And would you read your answer, please.

8 A. Would you point me to specifically  
9 again?

10 Q. Yeah, sorry. I just read into the  
11 record the question that begins on line four, page  
12 80 and the answer begins on line six.

13 A. Okay. "Well, initially, yeah, there was  
14 a war. You know, a lot of times that hurts it.  
15 The training, et cetera, we have a much more  
16 experience pilot base now than -- I don't want to  
17 say now, but in the last five or 10 years than  
18 before. That's due to funding and training, et  
19 cetera."

20 Q. And then I also asked you whether, at  
21 line 17 of the same page, "Do you also have better  
22 maintenance practice procedures?" And could you  
23 read your response.

24 MR. SOPER: Well, you know, let me  
25 object, Your Honor. I don't think it's proper

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1 cross-examination to read questions and answers  
2 from a deposition. The proper procedure is you ask  
3 a question, if there's an inconsistent answer, you  
4 may point it out with the deposition. I've never  
5 heard of just reading in a deposition for direct  
6 testimony. The witness ought to be asked a  
7 question first and the deposition only used if it's  
8 hearsay evidence.

9 MR. GAUKLER: I see no problem with  
10 doing that, Your Honor. He has said that, you  
11 know, the best life predictor -- the best predictor  
12 is the entire life of the plane.

13 JUDGE FARRAR: Even though we're not  
14 talking about the answers you're entitled to get,  
15 Mr. Soper's objection to the way in which you're  
16 conducting the deposition. I understand what  
17 you're saying, Mr. Soper, is that the way you  
18 suggest would be one way to do it, ask a question,  
19 and then say ah-hah, didn't you say the opposite  
20 last week?

21 MR. GAUKLER: I'll rephrase the  
22 question.

23 JUDGE FARRAR: I'm not saying the way  
24 you're doing it is wrong, but I don't know the  
25 answer to Mr. Soper's objection, so if you could

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1 find the -- off the record.

2 (Judges conferred off the record.)

3 JUDGE FARRAR: Back on the record.

4 Mr. Soper, the way you would have things done is  
5 one way to do them. Actually, the way Mr. Gaukler  
6 is doing it may be more fair to your witness in  
7 that he's letting -- referring him to the previous  
8 answer first and then trying to get the  
9 elaboration. So we'll certainly let him continue  
10 to do it that way.

11 MR. SOPER: Very well. Thank you, Your  
12 Honors.

13 MR. GAUKLER: Could I go ahead the way I  
14 was doing before, Your Honor?

15 JUDGE FARRAR: Yes.

16 Q. (By Mr. Gaukler) And then I asked you  
17 on page 80 again, line 17, "Do you also have better  
18 maintenance practice procedures?" And would you  
19 read your response to that?

20 A. "Better practice, better procedures,  
21 better training, better analytical tools, if you  
22 will. All of that, certainly. Better technology."

23 Q. Now, so in other words, you have better  
24 technology that enables the better design of an  
25 aircraft than you did in the past; correct?

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1 A. Yes.

2 Q. And in addition to better technology,  
3 the new element you have nowadays is the ability to  
4 simulate things or events or design how a plane  
5 will operate when you didn't have years ago, and  
6 that's another element that makes for better  
7 airplanes with lower crash rates?

8 A. I don't believe that's true. They  
9 were -- and I should explain. The F-15 was built  
10 about five years before the F-16. It's commonly  
11 discussed in the Air Force that the F-16 has more  
12 in common with the P-51 than it has with the F-16.  
13 The F-16 is a computerized airplane. It has a lot  
14 of technology built in, and they continue to add  
15 more. And they're able to simulate a lot of things  
16 and they were able to simulate a lot of things  
17 during the development of the F-16. So I'm sure  
18 the simulation has improved, obviously, but it  
19 hasn't just started.

20 Q. Okay. And so you still would agree with  
21 the question and answer on page 81, "And would you  
22 be able to simulate things in a computer design of  
23 a plane that previously you would have to find out  
24 in the field?" And your answer was?

25 A. It was "absolutely". And that is in the

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1 case of the F-16, also.

2 Q. And all these factors have led  
3 historically to lower crash rates over time for the  
4 Air Force?

5 A. That's correct. And if you predict in  
6 10 years in the future, they'll have minus 200  
7 crashes. I mean if you look at this chart, it  
8 depends on how you analyze it.

9 Q. What do you mean by minus 200 crashes?

10 A. Well, if you look at the rate, a year or  
11 so ago versus what it is now, if you draw a  
12 straight line to predict in the future, then that  
13 will be below zero. So what do you use to predict  
14 it on?

15 Q. So you draw a straight line, it's not  
16 the model, is that what you're saying? That's all  
17 that proves; correct?

18 A. It depends on how you look at the  
19 trends. I mean I do a lot of looking at charts and  
20 trends, et cetera, and as we're all struggling,  
21 there's no way to predict the future. If you use a  
22 linear trend from calendar 1947 to fiscal year  
23 1998, then in 2010, we'll have minus zero something  
24 accidents.

25 JUDGE FARRAR: Unless we're just

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1 approaching zero.

2 COL. HORSTMAN: Or we have already  
3 bottomed out.

4 Q. (By Mr. Gaukler) That wasn't your  
5 testimony back in the deposition, was it, though?  
6 It's every few years, the Air Force announces a  
7 lower rate due to these various factors; correct?

8 A. I think we read that.

9 JUDGE FARRAR: Mr. Gaukler, before you  
10 go on about this chart, I'm trying just a matter of  
11 form in looking at it, I need to move my -- all my  
12 headings over to the right ever so slightly? Isn't  
13 this just the way it happened to print out?

14 COL. HORSTMAN: I wouldn't, sir. If you  
15 look under the column class A.

16 JUDGE FARRAR: Right.

17 COL. HORSTMAN: There's a number, and  
18 then to the right there's a rate.

19 JUDGE FARRAR: Right, but that number in  
20 1947 is 1555.

21 COL. HORSTMAN: Okay, I see, yeah, where  
22 the tabs are.

23 JUDGE FARRAR: Right. In other words,  
24 the tabs and the headings don't line up with the  
25 tabs in the columns.

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1 COL. HORSTMAN: The number designator.

2 JUDGE FARRAR: Right. The number is  
3 1555 and the rate is 4422.

4 COL. HORSTMAN: Correct.

5 MR. GAUKLER: I think if you just look  
6 at -- you have to kind of look at it diagonally to  
7 get the correct numbers.

8 JUDGE FARRAR: Now, that being so,  
9 what's non rate number, which is zero, the entry is  
10 zero most of the time, except once in a while it's  
11 one or two, what does that mean?

12 COL. HORSTMAN: It's not statistically  
13 significant, so I really don't know.

14 JUDGE LAM: I would read it as neither  
15 class A nor class B. I think that rate number  
16 meant that.

17 COL. HORSTMAN: Well, there's also class  
18 C, sir, and that's a lesser value, and those are  
19 very, very frequent.

20 JUDGE FARRAR: At this point, if no one  
21 explains to us what the first column means, then  
22 we'll just disregard it for purposes of this case.

23 MR. GAUKLER: Okay, sounds reasonable to  
24 me.

25 I would move for the admission of PF

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1 Exhibit 82.

2 MS. MARCO: No objection from the Staff.

3 JUDGE FARRAR: Mr. Soper?

4 MR. SOPER: My only problem with it,  
5 it doesn't say on it that it's for all aircraft,  
6 and --

7 MR. GAUKLER: He testified to that fact.

8 MR. SOPER: I wouldn't want it picked up  
9 and thought to be anything else. But maybe it's  
10 clear enough, in 1947, I don't know what they were  
11 flying, but it wasn't the F-16, so maybe it's  
12 apparent on its face.

13 JUDGE FARRAR: Okay. Now, how did this  
14 get your number? You all produced this? You  
15 didn't create the statistics, but you produced the  
16 document?

17 MR. SOPER: It's just printed off a web  
18 site.

19 JUDGE FARRAR: Okay. Oh, yeah, it has  
20 the little stuff on the bottom there.

21 Colonel Horstman, do you understand for  
22 sure that this is all aircraft as opposed to a  
23 particular kind of Air Force aircraft?

24 COL. HORSTMAN: 98 percent. There's no  
25 such thing as a hundred, I don't think.

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1 JUDGE FARRAR: It doesn't distinguish --  
2 I mean the document says, Mr. Soper, U.S. Air Force  
3 history, and it goes through a 50-year period in  
4 which we've had a number of different aircraft. So  
5 taking the witness's answer --

6 MR. GAUKLER: General Cole I think can  
7 provide yet another answer. I think it's all  
8 aircraft.

9 GEN. COLE: It is, sir. This is a class  
10 A rate for all Air Force aircraft. I can testify  
11 to that simply because when I was Chief of Safety  
12 in the Air Force, the three numbers there were the  
13 numbers for the entire Air Force, all aircraft.

14 JUDGE FARRAR: Okay, thank you.

15 MR. GAUKLER: That reflects not only  
16 class A but class B?

17 GEN. COLE: That's correct.

18 JUDGE FARRAR: Okay. Thank you. If  
19 there's no objection or anything to add to what  
20 General Cole just helped us with, then, Mr. Soper,  
21 with that understanding, we'll admit the  
22 Applicant's 82 into evidence. That end the crash  
23 rates, Mr. Gaukler?

24 MR. GAUKLER: Yes.

25 JUDGE FARRAR: Oh, good. It's a quarter

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1 to one. Let's be back from lunch -- I'm tempted to  
2 shorten breaks, but we're all slowing down a little  
3 at this stage of the week, so let's take the full  
4 45 minutes till 1:30.

5 (Lunch recess was taken.)

6 JUDGE FARRAR: We are back on the record  
7 after our lunch break. Mr. Gaukler, you were going  
8 to be continuing your cross-examination.

9 MR. GAUKLER: Yes, I was. Excuse me. I  
10 think I need a document that is being copied at  
11 this moment.

12 JUDGE FARRAR: While Mr. Gaukler is  
13 doing that, can other counsel help me with the  
14 schedule for the environmental week?

15 MS. MARCO: I'm not sure when we are  
16 doing --

17 JUDGE FARRAR: Do it on the record.

18 MR. GAUKLER: I believe SUWA B will be  
19 Tuesday, the 23rd.

20 JUDGE FARRAR: SUWA the 23rd, and Ms.  
21 Walker is okay?

22 MR. SILBERG: I believe so, yes.

23 JUDGE FARRAR: You have consulted with  
24 her? Because that doesn't involve the State.

25 MR. SILBERG: Correct.

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1 JUDGE FARRAR: Mr. Silberg, can you  
2 check with her next week?

3 MR. GAUKLER: I saw an e-mail last night  
4 from Denise saying SUWA Tuesday, Utah O Wednesday,  
5 and SS argument Thursday. And she said she had  
6 talked with Sherman and Jay about that.

7 JUDGE FARRAR: And the SS argument on  
8 Thursday. And limited appearances on Friday.

9 MR. SILBERG: We are on the record for  
10 the purposes of making sure we knew where we are  
11 going with the environmental issues.

12 Mr. Gaukler, you have the document?

13 MR. GAUKLER: Excuse me?

14 JUDGE FARRAR: Has the document come?

15 MR. GAUKLER: Yes.

16 JUDGE FARRAR: Go ahead.

17 Q. (By Mr. Gaukler) Handing out two  
18 documents, the first one is the table. It's a  
19 rating of PFS Exhibit X. And I'm handing out  
20 excerpts of the declaration of Hugh Horstman from  
21 January 30, 2001, as marked up in this deposition  
22 of July 27, 2001.

23 JUDGE FARRAR: And is the declaration we  
24 are getting the same --

25 MR. GAUKLER: It's the same as the one

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1 before, except two things. One, it is just  
2 excerpts; and those excerpts contain some  
3 handwritten marks made by Lt. Colonel Horstman  
4 during the deposition.

5 JUDGE FARRAR: Okay. Thank you.

6 MR. GAUKLER: And I would introduce  
7 this. I'd like to have the declaration excerpts  
8 marked as PFS Exhibit 83.

9 MR. SOPER: Isn't this the same as X to  
10 your prefiled testimony?

11 MR. GAUKLER: That's just a courtesy  
12 copy.

13 JUDGE FARRAR: The first document is a  
14 courtesy copy of something we have already seen  
15 before?

16 MR. GAUKLER: PFS X. Already admitted  
17 and identified as such.

18 JUDGE FARRAR: And the second document  
19 we are getting now is excerpts from the declaration  
20 we have seen, but these are excerpts you want  
21 marked for identification as PFS 83.

22 (EXHIBIT-83 WAS MARKED.)

23 JUDGE FARRAR: All right, Mr. Gaukler.

24 Q. (By Mr. Gaukler) Have you had a chance  
25 to review the two documents, Lt. Colonel Horstman?

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1 A. Briefly, yes.

2 Q. Do you recognize the first document that  
3 was handed out, which is Table 1?

4 A. Yes.

5 Q. And that has been identified as excerpts  
6 from PFS X. Now, as we discussed in your July 27,  
7 2001 deposition, you and I marched through the 12  
8 accident reports with which you took issue.

9 Correct?

10 A. That's correct, sir.

11 Q. And after each accident report I had you  
12 mark on this table how you would categorize the  
13 accidents. Correct?

14 A. That's correct.

15 Q. And you recognize this document as that  
16 table you marked up in your deposition?

17 A. I do. And I apologize for my  
18 handwriting.

19 Q. Don't worry. You didn't know it was  
20 going to be so public, right?

21 A. No.

22 Q. Now, as we discussed in your deposition,  
23 this table represents all of your disagreements  
24 with respect to PFS's categorization of the  
25 accident reports that we reviewed; correct?

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1 A. That is correct.

2 Q. So going to your testimony -- excuse me.  
3 With respect to what's been identified as PFS  
4 Exhibit 83, do you recognize that as excerpts of  
5 your January 30, 2001 deposition?

6 A. Yes.

7 Q. And do you recall at the deposition that  
8 you marked up certain aspects of your deposition  
9 to --

10 A. Yes.

11 Q. Aspects of your declaration of your  
12 deposition. And the purpose of doing that was to  
13 have your declaration correspond to the categories  
14 as you outlined on the Table 1, which is PFS  
15 Exhibit X; right?

16 A. That's correct.

17 Q. And so in the process, if you look on  
18 Page 16 with respect to Skull Valley conditions,  
19 you changed your assessment with respect to three  
20 accidents during the course of the deposition;  
21 correct?

22 Let me rephrase that. That's not  
23 correct. You corrected your declaration to show  
24 differences with respect to three of the accidents,  
25 and I understand that three of the accidents should

1 be deleted from your declaration.

2 A. That's correct.

3 Q. And that was in Paragraph 56. And in  
4 Paragraph 55 again you deleted one of the  
5 accidents?

6 A. That's correct.

7 Q. Now, this was after you had done the  
8 review and went through the table and basically  
9 said to strike those portions of the declaration;  
10 correct?

11 A. Yes.

12 Q. Now, looking back at these numbers or  
13 these paragraphs, 55 and 56, didn't your analysis  
14 in this declaration that you filed in support of  
15 the State's opposition to Motion for Summary  
16 Disposition, you were basically following the same  
17 methodology as set forth in the report by Generals  
18 Cole, Jefferson, and Fly, except you were coming up  
19 with different numbers both in terms of the ability  
20 to avoid, factor, and whether a pilot who was in  
21 control would, in fact, avoid a site. Isn't that  
22 correct?

23 A. Essentially, yes.

24 Q. So you were applying R reduction factor,  
25 but said it should be a different one from what we

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1 had applied.

2 A. No. I have never done any work with an  
3 R factor.

4 Q. Did Dr. Resnikoff do that work, do you  
5 know? I'm asking whether you know if Dr. Resnikoff  
6 did any work on an R factor?

7 A. I'm not sure.

8 Q. Now, even though you have numbers here  
9 like 77 percent, 62.5 percent, these were numbers  
10 calculated by Dr. Resnikoff, if I understand  
11 correctly?

12 A. Correct.

13 Q. And you just included them in your  
14 declaration; correct?

15 A. He did the math.

16 Q. Where did the input numbers come from  
17 for the math?

18 A. I gave them to him.

19 Q. And those were in terms of how many you  
20 categorized by different events, whether it was  
21 able to avoid and Skull Valley type events?

22 A. Based on my professional judgment, what  
23 the categories should be.

24 Q. So if you look at Table 1, I believe we  
25 already identified that Table 1 comprises 121

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1 separate destroyed aircraft; correct?

2 A. That's correct.

3 Q. And you changed or -- you changed 12 of  
4 the classifications; is that correct?

5 A. Yes.

6 Q. And so on the other 109 accident reports  
7 evaluated by Generals Cole, Jefferson, and Fly, you  
8 agreed with our categorization of those accidents?

9 A. That's correct.

10 Q. I'd like to go back to your prefiled  
11 testimony. You say -- so in other words, we go  
12 back to Section 5 of your prefiled testimony, the  
13 PFS analysis of F-16 accident reports, beginning on  
14 Page 30.

15 A. Okay.

16 Q. Any disagreement with respect to, as  
17 expressed here, would be limited to the 12  
18 accidents that you marked up in the Table 1, as  
19 shown in PFS Exhibit X.

20 A. I think so, yes.

21 Q. Now --

22 MR. TURK: May I ask for a  
23 clarification? Just for the record, Mr. Gaukler,  
24 or Colonel Horstman, could you identify by number  
25 which of the incidents were taken issue with? I

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1 count eleven.

2 MR. LAM: Right. I count eleven, too.

3 Q. (By Mr. Gaukler) I think, if I can  
4 refresh Colonel Horstman's recollection, if I could  
5 ask the witness again to refresh his recollection,  
6 do you see the accident or the May 25, 1990  
7 accident? That's one we talked about at length  
8 already.

9 A. Yes.

10 Q. In that one you disagreed with the  
11 analysis in various respects of the accident but  
12 you didn't disagree with how we had categorized it,  
13 at least for purposes of our lower-bound  
14 evaluation?

15 A. I don't disagree with the  
16 categorization. I did put a check mark next to it.  
17 So that's part of the math.

18 Q. Now, on Question 81 in your prefiled  
19 testimony, you say that PFS excluded F-16 accident  
20 reports by incorrectly assessing the phase of  
21 flight. And when you talk about incorrectly  
22 assessing the phase of flight, you are talking  
23 about the categorization on Table 1 under the  
24 column labeled ACRAM phase.

25 A. I'm sorry. Is that a question? I don't

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1 know.

2 Q. Yes. When you are talking about PFS  
3 incorrectly assessed the phase of flight, you are  
4 talking about the categorization that PFS or  
5 Generals Cole, Jefferson, and Fly made of the  
6 accident under the column labeled ACRAM phase?

7 A. That's correct.

8 Q. And so, for example, the one you  
9 mentioned there specifically in Question/Answer 81  
10 is an accident dated July 31, 1992.

11 A. That's correct.

12 Q. Now, that was an accident that you claim  
13 was caused by lightning; is that correct?

14 A. That's correct.

15 Q. And we discussed that in your  
16 deposition; is that correct?

17 A. That is correct.

18 Q. And if I recall correctly, you  
19 concluded -- you did not see any reference in the  
20 accident report to lightning, as such.

21 A. That's correct.

22 Q. And you concluded that the accident was  
23 caused by lightning because of a flash observed in  
24 the clouds; correct?

25 A. That's correct.

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1 Q. And another factor that led you to that  
2 conclusion was that you concluded that the accident  
3 had occurred during the daytime and one would not  
4 see the flash from a crashing F-16 on the ground  
5 through the clouds; correct?

6 A. I'm not sure. It's not in here.

7 Q. I'd like to turn you to Pages 107 to 108  
8 of your July 27, 2001 deposition.

9 A. Which pages?

10 Q. Pages 107 and 108. And I asked you  
11 what's the basis by which you conclude that the  
12 plane was hit by lightning. Could you read me the  
13 response? That's on the middle of Page 107 and  
14 Line 11.

15 A. "I guess it's an educated assumption.  
16 There are two members that said they saw a flash in  
17 the clouds essentially the same time a radio call  
18 was made. So assume it was a lightning strike or  
19 lightning of some type because if there are clouds  
20 from 1000 feet to 4500 feet there's no light on the  
21 ground during daytime that would be able to get  
22 through the clouds. So if it had come from  
23 lightning -- in other words if the aircraft were to  
24 point straight down and hit the ground with a big  
25 fireball, you would not see that if the cloud tops

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