

1 were 4500 feet and the base was at 1000 feet. So
2 it's an educated assumption, I guess."

3 Q. And I asked you, "What's your basis for
4 saying you wouldn't see the fireball through the
5 clouds?" And your response was?

6 A. "Because you would not. The amount of
7 light during the daytime, the luminescence, if you
8 will, would not penetrate that kind of cloud deck
9 because you are on top of the clouds."

10 Q. I'd like to hand out the accident report
11 for that accident.

12 JUDGE FARRAR: Mr. Gaukler, is this for
13 identification?

14 MR. GAUKLER: Just handing it out for
15 asking questions.

16 JUDGE FARRAR: Okay.

17 Q. (By Mr. Gaukler) Do you recognize what
18 I have handed out that is labeled AFR 110-14,
19 Aircraft Accident Investigation Report, with some
20 numbers and the date of July 31, or 31 July, 1992?

21 A. I recognize this.

22 Q. And this is the accident report for the
23 accident that we were discussing at the deposition
24 and for the accident that is referred to in Answer
25 81 to your prefiled testimony?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. That's correct.

2 Q. If you would look at Page 3, and
3 Paragraph 6 on Page 3. Doesn't it say there that
4 the plane was cleared for takeoff at 04:00 local?

5 A. Yes.

6 Q. And that would be 4:00 a.m. local time?

7 A. That's correct.

8 Q. And that would be nighttime; correct?

9 A. It's not daytime.

10 Q. Okay. Now, you also take issue with
11 respect to a couple other accidents that were, you
12 claim, misclassified by PFS with respect to phase
13 of flight. For example, one of your accidents, if
14 you look at Table X, under the number 28 for
15 February 20, 1991. You would change that phase of
16 flight from landing -- you would change that ACRAM
17 phase from landing to normal flight; right?

18 A. That's correct.

19 Q. And outside that, you had no change with
20 respect to that accident?

21 A. That's correct.

22 Q. And so, therefore, you still thought it
23 would be able to avoid the PFSF; correct?

24 A. No. Based on the categorization, you
25 would have the ability, given the time and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 circumstances, to avoid the PFSF.

2 Q. I misspoke. I apologize. And then with
3 respect to the accident appearing on the last page
4 with the number 109 next to it, again you changed
5 an accident from the landing phase to the normal
6 phase; correct?

7 A. That's correct.

8 Q. And you didn't change any of the other
9 categories in terms of the ability to avoid the
10 PFS; correct?

11 A. That's correct.

12 Q. So neither of those changes in phase
13 would affect PFS's calculation of ability to avoid
14 a site with respect to its category called Skull
15 Valley type events; correct?

16 A. That's correct.

17 Q. And you heard General Cole, General
18 Jefferson, and Col. Fly testify that they also
19 evaluated the subset of Skull Valley type events
20 which were in the normal phase of flight; correct?

21 A. Yes.

22 Q. And basically these two changes would
23 actually increase the population for that subset;
24 correct?

25 A. I was interested in doing those. I'm

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 not sure exactly what it does to the math, quite
2 honestly.

3 Q. Okay. Now, in Question and Answer 82,
4 you claim that PFS incorrectly, this is in the
5 prefiled testimony again, PFS incorrectly excluded
6 accidents that occurred at altitudes higher than
7 5000 feet AGL. Now, that's not quite correct, is
8 it? Didn't they include all flights of all
9 altitudes in the Skull Valley type events that they
10 thought could reasonably happen in Skull Valley?

11 A. It's my understanding that they excluded
12 some weather events.

13 Q. Based upon the altitude?

14 A. Give me one second, please.

15 Q. Certainly.

16 A. Okay.

17 Q. Let me just -- isn't it true that they
18 had altitude restrictions for Sevier B type
19 conditions. Correct?

20 A. That's correct.

21 Q. But on Skull Valley type events and the
22 subset of normal for flights in the Skull Valley
23 type events, they had no altitude restriction;
24 isn't that correct?

25 A. Skull Valley type events were not

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 altitude restricted, to my knowledge.

2 Q. Do you know about the normal, one way or
3 the other?

4 A. The normal what? I'm sorry.

5 Q. The Skull Valley type events were not
6 restricted.

7 A. Okay.

8 Q. Now, you also say that they excluded
9 some accidents while under instrument flight rules.
10 Can you tell me which of the 12 accidents that you
11 talked about on that table that you claim that they
12 excluded on the basis of instrument flight rules?

13 A. Off the top of my head, I cannot.

14 Q. So you can't at this time specifically?

15 A. That's correct. I don't recall.

16 Q. Remember when I asked you the same
17 question at your deposition, you similarly didn't
18 recall? If you look at Page 47 of your July 27,
19 2001 deposition?

20 A. Which page?

21 Q. Page 47.

22 A. Okay.

23 Q. Do you recall I had the same question
24 there?

25 A. Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Q. And your answer was that you could not
2 remember them at that time.

3 A. Yes.

4 Q. Therefore, you can't tell us at this
5 point in time exactly what's the basis for that
6 statement in your prefiled testimony?

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

8 MR. GAUKLER: I move to strike that
9 sentence, that phrase, "While under instrument
10 flight rules." Lack of basis.

11 MR. SOPER: May I respond, your Honor?

12 JUDGE FARRAR: Yes.

13 MR. SOPER: I have never heard of such a
14 procedure. The purpose of cross-examination is to
15 ferret out the extent of the witness's basis for an
16 answer. And I think he has done that. The result,
17 whatever it is determined to be by your Honors, is
18 something you take into account in your decision.
19 I have never heard it as a basis to strike anything
20 in a trial.

21 JUDGE FARRAR: Mr. Gaukler, as we
22 indicated in one of our decisions, maybe it was the
23 first seismic one the board I chaired did, we are
24 not fond of motions to strike for precisely the
25 reasons Mr. Soper stated. So you'll have to give

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 me a more forceful argument or we will just take it
2 for what it is worth.

3 MR. GAUKLER: We will just argue the
4 weight of it, your Honor.

5 JUDGE FARRAR: Okay. Thank you. Mr.
6 Gaukler, since that was a -- I have been waiting
7 for an interruption to ask a question.

8 MR. GAUKLER: I provided that
9 opportunity, at least; right?

10 JUDGE FARRAR: Thank you. A TV time-out
11 or something. And forgive me, Colonel Horstman. I
12 just can't seem to grasp this table. I have asked
13 a series of questions before and I'm not sure I got
14 it. And this is one of those things that I've got
15 to understand it because, come August, I don't want
16 to be left high and dry.

17 Now, I know this is not your table but I
18 want you to tell me what you understand from it.
19 With all these accidents, column one is engine
20 failure and I understand that. I understand column
21 two; able to avoid the facility. That means that
22 after whatever the accident was, the pilot -- or
23 did the pilot have the capability to avoid it,
24 namely was the airplane in control. Tell me what
25 the third -- I just don't understand what the third

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and fourth column headings mean. They both have
2 over them "Could this happen in Skull Valley". And
3 I think I know what the words mean, but then the
4 other day when I asked a series of questions, I
5 don't understand what the columns three and four,
6 what they are trying to convey. And I know it is
7 not your table, but how do you --

8 COL. HORSTMAN: In order to be as
9 precise as I need to be, Connie if I could ask you
10 to give those to me and I will try to, in plain
11 English, explain them.

12 JUDGE FARRAR: And this is not a
13 complicated question. This is -- I'm looking for
14 the simple understanding.

15 COL. HORSTMAN: Right.

16 JUDGE FARRAR: It's not that I
17 understand it but don't understand the refinements;
18 I just don't understand it.

19 COL. HORSTMAN: That's -- it is very
20 complicated and you look at an engine loss and if
21 it is a minute after takeoff do you qualify that as
22 this kind of activity?

23 JUDGE FARRAR: Let me interrupt you
24 there. Here is how my simple mind is looking at
25 it. If I lose an engine, unless you can tell me

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that -- if I lose an engine on takeoff, unless you
2 can tell me that the cause of losing the engine on
3 takeoff was because of the takeoff stress, then I
4 say, "Well I could have lost that engine anywhere
5 in the flight. It only happened to happen on
6 takeoff."

7 COL. HORSTMAN: Yes, sir. And
8 conversely, if you are at 30,000 feet, which is
9 outside the bounds of Sevier B or Skull Valley, the
10 same thing would hold true, assuming you are not
11 doing some kind of performance with the airplane.

12 JUDGE FARRAR: Right. And I understand
13 about G-LOC, that that doesn't happen on takeoff.
14 It happens on the hard right banks.

15 COL. HORSTMAN: Right. Or left.

16 JUDGE FARRAR: I knew that.

17 COL. HORSTMAN: If you look at air
18 combat, and we have talked about that, we ought to
19 talk about engines and mid-air because during air
20 combat training, if you were to lose your engine
21 you could categorize that as an air-to-air engine
22 failure. If you have those twenty to thirty
23 minutes of range space where you are going to do
24 aerial combat, say four guys against four guys or
25 gals, during that 30 minute range time block you're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 max performing the airplane for approximately two
2 minutes. The other 28 minutes are relatively --
3 well, not quite that many, but greater than twenty
4 minutes of that range time of aerial combat is on
5 auto pilot at 400 knots, cruising north or south,
6 waiting for everybody to get together and go
7 "hike", and then you go at the middle again. So
8 categorizing something as an engine failure during
9 aerial combat, you would have to further analyze
10 that it was under a high G-force or you went
11 through so much jet wash, like in Top Gun.
12 Something like that.

13 Similarly, with respect to mid-air
14 collisions, we had a mid-air collision here on the
15 record; two pilots right at each other, high speed,
16 airplanes exploding and a guy jumps out. That
17 could never happen in the Skull Valley. There are
18 three mid-air collisions that have been entered
19 into testimony that happened --

20 JUDGE FARRAR: Why couldn't a mid-air
21 happen in Skull Valley when you say to your wing
22 man, "Let's do our G thing," and he goes 180
23 degrees off the direction you expected him to go.

24 COL. HORSTMAN: Approximately, I want to
25 say three months ago, that happened in two A-10s.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 We don't have that in our database so we haven't
2 included it in the discussions, if you will. But
3 those two airplanes, high speed, that activity is
4 not going to happen in Skull Valley because it's
5 not permitted.

6 On the other hand -- and let me give you
7 three examples of mid-air collisions that could be
8 categorized a variety of different ways. One is
9 out of Atlantic City, New Jersey, an F-16 dawning
10 his night vision goggles at about the same time in
11 the mission you would be in Skull Valley, hit his
12 leader. Oops. Jumped out. Airplane crashes.

13 About two to three years ago at Luke Air
14 Force Base a few minutes after takeoff, while doing
15 a normal administrative rejoin to go through the
16 weather, the wing man hit his leader and jumped
17 out.

18 An aircraft accident in Florida during a
19 photo chase mission -- that's like a special
20 in-flight mission. However, Hill has combat
21 photographers, and when I was there we asked our
22 combat photographer to fly one day a week with us.
23 What happened in that case is that they bumped each
24 other taking pictures and they crashed. They would
25 never bump into each other doing a high performance

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 aerial combat. So that would be excluded from that
2 aerial combat range.

3 So there are so many, many categories to
4 look at. And if it's an engine failure a minute
5 after takeoff, should you exclude it? It's a value
6 judgment. Like you said, maybe yes, maybe no.

7 JUDGE FARRAR: I would -- if I were
8 doing the analysis, knowing nothing, I would
9 exclude it if I could establish that the engine
10 failure was due to the stresses of takeoff.

11 COL. HORSTMAN: And I understand that.

12 JUDGE FARRAR: But it looks like a lot
13 of these reports, the few we have read in detail
14 during the course of the proceeding, the engine
15 fails and it just failed for some mechanical reason
16 at that point, and you are not able to say it's
17 because it's -- it may have happened on landing or
18 takeoff, but it wasn't because of landing or take-
19 off.

20 COL. HORSTMAN: Yes. You won't find
21 that kind of data to mine.

22 JUDGE FARRAR: So given what you have
23 just said, let's get back to the original question,
24 what are these headings intended to convey?

25 MR. GAUKLER: Can I just ask --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 JUDGE FARRAR: Not why. Before you tell
2 me why one of these is put in one column, that it
3 is yes or no in one of the other columns, tell me
4 what they are intended to convey. And before you
5 tell me, Mr. Gaukler is trying to help me.

6 Q. (By Mr. Gaukler) I was just going to
7 ask him, Lt. Colonel Horstman, if he understood
8 that the Skull Valley type event would include
9 engine failures during takeoff that wasn't affected
10 by takeoff, or would include engine failures during
11 special ops regardless of altitude. Is that your
12 understanding of how --

13 A. Just one second, please. 16 March, 1990
14 there was an engine failure that is not a Skull
15 Valley type of event.

16 Q. But there's other engine failures, are
17 there not, that --

18 A. There are.

19 JUDGE FARRAR: Let's use that as an
20 example. Take that one that says the phase was
21 normal in flight, it was an engine failure, but
22 it's not a Skull Valley type event. Maybe that's a
23 good example to show me what that fourth column
24 means.

25 COL. HORSTMAN: Yes, sir. And I will --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 JUDGE FARRAR: But Mr. Gaukler --

2 MR. GAUKLER: And Col. Fly explained why
3 we didn't include it in that column, as well.
4 Could I ask one clarifying question, as well? I
5 think it would help your Honor.

6 Q. (By Mr. Gaukler) If you look at number
7 22, that's a special in-flight operations.

8 MR. SOPER: Shouldn't we finish the one
9 we are on first?

10 COL. HORSTMAN: I'm trying to read this.

11 JUDGE FARRAR: If I know what the
12 columns mean, I can maybe figure out for myself why
13 some get a no and some get a yes. But hold on a
14 minute.

15 (Board confers off the record.)

16 JUDGE FARRAR: Mr. Witness, before you
17 answer, let me make sure you understand how very
18 simple this question is.

19 COL. HORSTMAN: And I'll try to give you
20 a half paragraph.

21 JUDGE FARRAR: When I ask a simple
22 question and can't get an answer, and I know this
23 is not your table, but I then realize maybe the
24 question isn't as dumb as I thought it was.

25 What I want to know is not why is a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 particular event in there. When they did this they
2 said, "Let's do a table. We are going to create
3 bins here and put things in these bins." What are
4 the bins? What are the bins supposed to represent
5 and what are the criteria for putting things in the
6 bins? Now, if you want to use an example to show
7 me, but I'd love it if someone would tell me what
8 these column headings are supposed to represent.

9 MR. LAM: Basically Judge Farrar is
10 asking what are the selection criteria for the two
11 different columns.

12 COL. HORSTMAN: It's an outstanding
13 question. Sevier B MOA flight conditions. This is
14 the first of the two categories. Did the accident
15 happen in conditions which matched what you would
16 normally have transiting Skull Valley?

17 Q. (By Mr. Gaukler) Would you tell the
18 board where you are reading from?

19 A. He just asked me to give the definition.

20 Q. I thought you were reading from a
21 definition.

22 A. I'm paraphrasing.

23 MR. TURK: May I note one thing?
24 Because the Applicant prepared the table and these
25 categories, I think looking for the best evidence

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 perhaps we should ask one of those witnesses to
2 return and explain the bins.

3 JUDGE FARRAR: I think I did, and I
4 think they gave what was thought to be a
5 satisfactory answer to them. But I don't have it
6 in mind yet. I'll be happy to have them come back
7 later. But since this witness had worked a lot
8 with this and gave us a good tutorial before on the
9 map, I thought he might be able to help. But you
10 are right about the best evidence.

11 MR. TURK: The danger is he is giving
12 his understanding, and I don't know, not having
13 heard it, whether it is a correct understanding or
14 not.

15 JUDGE FARRAR: Well, let's hear it and
16 then if somebody thinks that is wrong, they can say
17 so.

18 MR. SILBERG: Judge Farrar, I think
19 there is also a definition in the testimony. The
20 Applicant's testimony explains this table and
21 provides a definition. I'm sure you have read
22 that. But I don't know if that definition is fresh
23 in your mind right now. I think we can tell you
24 where that definition is.

25 JUDGE FARRAR: Go ahead.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. GAUKLER: It's on Question and
2 Answer Number 99 on page 59-60.

3 JUDGE FARRAR: Wait. Wait.

4 MR. GAUKLER: Prefiled testimony --

5 COL. HORSTMAN: For who?

6 MR. GAUKLER: For Cole, Jefferson, Fly.
7 Page 59-60.

8 JUDGE FARRAR: Okay. Given that
9 definition, which I had read at an earlier point
10 but hadn't recalled, I think that answers my
11 question in the way I had hoped. The fact that
12 something didn't happen in exactly the parameters
13 you'd be in in Skull Valley, they still put it in
14 there if the cause, as they discerned it - and
15 people can argue about that - but if the cause as
16 they discerned it could have happened in Skull
17 Valley. In other words, the engine failed because
18 it was too old. Failed on takeoff. That could
19 have happened six minutes later in Skull Valley.
20 And so that would have been included. Mr. Witness,
21 that's how you understand it?

22 COL. HORSTMAN: Generally, yes.

23 JUDGE FARRAR: Okay.

24 COL. HORSTMAN: And quite honestly, you
25 look at the Skull Valley type event and it's a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 broad category. Is there an altitude with it? The
2 issue at hand for me, sir, is that we have these
3 event categorizations that are kind of unclear.
4 And they can't be clarified because in a lot of the
5 accident reports they don't have enough data to
6 mine enough information.

7 JUDGE FARRAR: Okay. But that's another
8 issue and that is what you and Mr. Gaukler are
9 talking about. But I can't understand what you are
10 talking about unless I understand what these bins
11 look like. So now that I -- you are dealing with
12 the next issue down the road. I just wanted to
13 make sure. And I saw, when I just said what I saw
14 the explanation of, I saw General Cole in the
15 audience nodding his head. And since he is still
16 under oath, may the record reflect that, also.
17 Sorry for the delay but I wanted to make sure I
18 grasped what was going on here.

19 MR. GAUKLER: Thank you, your Honor.

20 COL. HORSTMAN: Perhaps I can illustrate
21 with a small example. The 1000 to 5000 feet AGL
22 could happen at 13,000 feet. That's not in the
23 Sevier B MOA.

24 MR. GAUKLER: But it isn't a Skull
25 Valley type event.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 COL. HORSTMAN: Yes.

2 JUDGE FARRAR: And you would argue that
3 that should be in the Sevier B MOA?

4 COL. HORSTMAN: Well, it depends. Is it
5 IFR? Am I seeing the weather or not? And the
6 Sevier B, their categorization says you have to be
7 clear of clouds, is what they are saying. So it's
8 very complicated. It's not as easy, which is why
9 we are arguing over the "each"s.

10 JUDGE FARRAR: But on most of these, the
11 most common accident, my problem is the most common
12 accident is engine failure and I have heard very
13 little in this trial so far that related any of the
14 engine failures to particular flight circumstances.
15 So my simple-minded assumption would be every
16 engine failure should be in the bins.

17 COL. HORSTMAN: And about half of them
18 are engine failures.

19 JUDGE FARRAR: I mean, I think I'm
20 alright now, but feel free to develop the record.

21 COL. HORSTMAN: But those, sir, aren't
22 Sevier B flight conditions. Approximately 50 of
23 all of the accidents that we have reviewed are
24 engine failures, plus or minus two percent, I
25 believe. And yet if you look at Sevier B flight

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 conditions, the vast majority are "no".

2 JUDGE FARRAR: And you don't like that.

3 COL. HORSTMAN: I don't think it is
4 conservative, sir.

5 Q. (By Mr. Gaukler) You would agree
6 wouldn't you, Lt. Colonel, that most engine
7 failures are in the Skull Valley type events;
8 right?

9 A. Most of them are.

10 JUDGE FARRAR: Are columns three and
11 four mutually exclusive? Can you be in both?

12 MR. GAUKLER: You can be in both, as
13 explained by our people. Skull Valley type event
14 is the broad category, and Sevier B is the subset
15 of that category.

16 JUDGE FARRAR: Judge Lam claims to
17 understand this. Usually when he claims to
18 understand something, he is almost always right.

19 MR. LAM: Almost always.

20 JUDGE FARRAR: And he is almost always
21 able to explain to me so I understand it, but this
22 time I don't. If you'd like to take over and ask
23 some questions.

24 COL. HORSTMAN: If I could --

25 JUDGE FARRAR: Let him ask some

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 questions to put his understanding either on the
2 record or tested by the witness or by counsel.

3 MR. LAM: Lt. Colonel Horstman, isn't it
4 the essence of this dispute here currently between
5 you and Mr. Gaukler, it's on your challenges to the
6 categorization of the event in the master debtor
7 file which I refer to as PFS Exhibit X, the table
8 of all the 121 events. Now, to my understanding,
9 by challenging the categorization, if your
10 challenges are successful that would directly
11 impact on Tab H of the accident report analysis,
12 which results in perhaps a different success
13 probability for a pilot to avoid the land target.
14 Am I correct?

15 COL. HORSTMAN: Yes, sir. And let me
16 further answer. In 41 percent of all of our
17 accident database that we have chosen to use, we
18 are not using A-10s, we are not using F-15s, we are
19 using F-16s. In 41 percent of all of the
20 accidents, the pilot was not able to avoid PFS
21 site. In 41 percent. So in order to reduce the
22 risk, we are then going to begin categorizing in
23 different bins articulate ways for us to try to
24 convince the three of you that we should exclude
25 those from the database. But 41 percent of every

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 one of these crashes we have looked at left the
2 pilot without the ability to control the aircraft
3 where it impacted on the earth. 41 percent. And
4 we are asked to assume that 95 or 90 percent or
5 some arbitrary number is more accurate. We have a
6 problem with that.

7 MR. LAM: So you are basically trying to
8 change both the number or population in the
9 enumerator and in the denominator of the table
10 given on Page 20 in Tab H of the accident report.
11 That's what you are attempting to do.

12 COL. HORSTMAN: We are attempting to do
13 that in order to add some realistic judgment as
14 opposed to further finite categorizations.

15 MR. LAM: Thank you, Lt. Colonel
16 Horstman.

17 COL. HORSTMAN: Yes, your Honor.

18 MR. LAM: The record should reflect on
19 this.

20 Q. (By Mr. Gaukler) If you would look at
21 PFS.Exhibit X, which is the Table 1 that we have
22 been discussing.

23 A. Yes, sir.

24 Q. Now, as we discussed in your deposition,
25 you went through and marked all the changes that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you would have in that table; correct?

2 A. That is correct.

3 Q. And first of all, in terms of just able
4 to avoid, you changed six from yes to no and I
5 think one from no to yes. Am I correct on that?

6 A. Number 30 we changed to no. Number 31
7 we mismarked that and so there's no initial next to
8 it.

9 Q. Okay.

10 A. I believe six is the correct number.

11 Q. In any event, to the extent you disagree
12 with our categorization, it is reflected in Table 1
13 as you marked up in your deposition; correct?

14 A. Yes, sir, that's correct. Based on the
15 categories that you provided us to evaluate.

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

17 JUDGE FARRAR: Wait a minute, Mr.
18 Gaukler. That last answer says -- I read into that
19 answer that you took their categories and you
20 worked at a microlevel disagreeing with some of
21 their judgments where they made the categories.
22 But I thought your answer to me was you didn't like
23 the categories.

24 COL. HORSTMAN: Sir, when they provided
25 us this document, the only tool that we had to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 begin to disagree with was each particular box of
2 information.

3 JUDGE FARRAR: Given these categories,
4 where they set the definitions, you are quarrelling
5 with some relatively few items. But if you were
6 doing this table, you would define the categories
7 differently? Is that how I understand the last
8 seven or eight minutes of discussion?

9 COL. HORSTMAN: Sir, I couldn't have
10 said it any better.

11 JUDGE FARRAR: I'll quit there.

12 COL. HORSTMAN: Again, 41 percent of
13 these airplane crashes, the pilot did not have the
14 ability to control where the airplane hit the
15 earth. And we have reduced that to a number that
16 is absurd.

17 Q. (By Mr. Gaukler) Lt. Colonel
18 Horstman --

19 JUDGE FARRAR: Hold on a minute, Mr.
20 Gaukler. I'm sorry. This is the fiftieth time I
21 have interrupted you today. Given this little
22 colloquy, Mr. Gaukler and Mr. Silberg, we had
23 talked earlier about having Dr. Resnikoff come
24 later during a later phase of the trial. Do we
25 need to reserve time that you are going to want to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 put General Cole and General Jefferson back on the
2 stand to explain this? In other words, having
3 asked this witness, who didn't do the table, about
4 his understanding, it would seem only fair that
5 they get a chance to come back on if they have some
6 different understanding that they want to share
7 with us.

8 MR. SILBERG: We certainly intend to
9 have the panel back on as rebuttal witnesses.

10 JUDGE FARRAR: And if we don't do that
11 today, when would that be?

12 MR. SILBERG: That's a separate topic of
13 discussion among all the parties that I suspect we
14 ought to do off the record.

15 JUDGE FARRAR: Right now or later? In
16 other words, we will, given our sixth week, we will
17 be able to get them back sometime?

18 MR. GAUKLER: I checked with them and
19 they were --

20 MR. SILBERG: Yes.

21 JUDGE FARRAR: That's all I need to
22 know.

23 Q. (By Mr. Gaukler) Lt. Colonel Horstman,
24 you understand the Skull Valley type event is an
25 event that could reasonably be expected to happen

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 in Skull Valley. Is that the way you understand
2 the definition?

3 A. Based on these categories, yes, sir, it
4 is.

5 Q. And when you looked at these accidents,
6 if you thought that something could reasonably
7 happen in Skull Valley, that type of accident could
8 reasonably happen in Skull Valley, you would change
9 a no in that column to a yes; wouldn't you?

10 A. That's correct.

11 Q. And if you --

12 A. Based on your definition.

13 Q. Based on our definition?

14 A. Yes, sir. The scope --

15 Q. I don't understand how based on our
16 definition -- first of all, go ahead --

17 A. As his Honor asked, we have looked at
18 each of these accidents with respect to the column
19 that you are talking about. I understand your
20 definition and I understand that each one of these
21 we have reviewed and tried to come to an agreement
22 on what ought to be in that box.

23 Q. Now, do you believe that other events
24 other than those that you identified as a yes in
25 the Skull Valley type event column could reasonably

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 be expected to happen in Skull Valley?

2 MR. SOPER: For the form of the
3 question, I'm not sure if he is asking what we were
4 driving at. If he believes in his own heart that
5 the situation could happen in Skull Valley as
6 opposed to does he believe he has correctly
7 assessed this by your definition? And I think we
8 need to keep that absolutely clear so there's no
9 mistake.

10 JUDGE FARRAR: You are absolutely right,
11 Mr. Soper.

12 Q. Lt. Colonel Horstman, would you turn to
13 the definition of Skull Valley type event on Page
14 60 of General Cole, General Jefferson, and Col.
15 Fly's testimony?

16 A. Okay.

17 Q. Skull Valley type event. And would you
18 read that definition into the record, please.

19 A. "Skull Valley type event. The yes or no
20 categorization for this parameter is our judgment
21 as to whether the events leading to the accident
22 could have occurred in Skull Valley. This broader
23 category includes all accidents that could have
24 reasonably happened in Skull Valley near the
25 proposed PFS site, even if they happened under

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 circumstances not typically associated with flight
2 through Skull Valley; altitude, air speed, et
3 cetera. This broad category, which encompasses all
4 the accidents in the Sevier B MOA condition
5 category described above, was used for the first
6 and most inclusive analysis in the aircraft report,
7 Tab H. Accidents are labeled either Skull Valley
8 type event or not a Skull Valley type event."

9 Q. So this category was intended to
10 include, by General Jefferson, General Cole, and
11 Col. Fly, looking at that second sentence, all
12 accidents that could have reasonably happened in
13 Skull Valley near the proposed PFSF even if they
14 happened under circumstances not typically
15 associated with flight through Skull Valley.
16 Correct?

17 A. That is correct.

18 Q. Therefore, they would encompass the
19 chairman's example of an engine failure during
20 takeoff, generally speaking.

21 A. Then why is the engine failure of 16,
22 March 1990 not included in Skull Valley type
23 events? We didn't argue that one.

24 Q. Why March 16, 1990? You reviewed the
25 accident report, right?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. I have.

2 Q. And you came to a conclusion yourself
3 whether that could happen in Skull Valley or not;
4 correct?

5 A. Based on your parameters.

6 Q. What in our parameters made you decide
7 that that event should not be a Skull Valley event
8 where you would have included it in Skull Valley?

9 MR. SOPER: I would suggest that the
10 parameters include more that is in the direct
11 testimony. The testimony adopts the crash report
12 which has a little more lengthy definition. It's
13 Exhibit N at Page 14.

14 JUDGE FARRAR: What page, Mr. Soper?

15 MR. SOPER: I believe it is 14, your
16 Honor.

17 MS. NAKAHARA: Of Tab H.

18 MR. SOPER: Of Tab H to the Exhibit N.

19 JUDGE FARRAR: Okay. That --

20 MR. GAUKLER: Doesn't it have --

21 JUDGE FARRAR: Wait, wait. That
22 definition that's on Page 15 and 14 of Tab H looks
23 like the kind of definition that would seem okay to
24 me under my line of questioning. But let's take
25 the one example the witness had mentioned, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 March 16, 1990, which is an engine failure, normal
2 in flight. It's not included in Skull Valley so I
3 want to know, from whoever can tell me, number one,
4 why the Applicant didn't include it in that column;
5 and then, number two, if they had a bad reason for
6 not including it why this witness didn't argue
7 about it when he had the chance to argue about it;
8 and number three, does he want to argue about it
9 now? And then when we finish all those three
10 things, then I maybe will understand this.

11 COL. HORSTMAN: Sir, I think I can help
12 you. If --

13 JUDGE FARRAR: Wait. I don't want you
14 helping me while Counsel are getting ready to
15 listen to your answer.

16 (Board conferred off the record.)

17 JUDGE FARRAR: I will give you one
18 chance to answer my three questions and then I will
19 turn you back to Mr. Gaukler, and then at some
20 future date the Applicant's panel will have a
21 chance to explain this again. So one chance, and I
22 need a simple answer. Why did they exclude it?
23 Why would you exclude it? And if you would exclude
24 it, why didn't you argue about excluding it earlier
25 when you had the chance?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 COL. HORSTMAN: Sir, the categorization
2 of Skull Valley type of events excludes some things
3 that we have a problem with, and I quote --

4 JUDGE FARRAR: Wait, wait. You didn't
5 hear me. This is a simple answer. And we are
6 talking about March 16, 1990. Why did they exclude
7 it?

8 COL. HORSTMAN: They excluded it because
9 it was a high altitude, low speed event. And so
10 based on that --

11 JUDGE FARRAR: But it was an engine
12 failure.

13 COL. HORSTMAN: Yes, sir.

14 JUDGE FARRAR: Called normal in flight.

15 COL. HORSTMAN: Yes, sir.

16 JUDGE FARRAR: Okay. Why would you
17 include that?

18 COL. HORSTMAN: Your second question is
19 we didn't dispute that because it was a high
20 altitude, low speed event as we interpreted that,
21 and I think that's above a certain altitude and
22 below a certain air speed, which is a judgmental
23 call.

24 JUDGE FARRAR: Why would you now include
25 it?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 COL. HORSTMAN: Because you just told
2 us, sir, that an engine failure that was not
3 associated with the takeoff should be included.

4 JUDGE FARRAR: No. What I told you was
5 my layman's analysis says to include all engine
6 failures unless you can tell me that the cause was
7 something that particularly only happened in these
8 other circumstances.

9 COL. HORSTMAN: Okay. Thank you. There
10 is nothing in this accident report that indicates
11 anything spectacular happening to cause the engine
12 to fail.

13 JUDGE FARRAR: So now, understanding how
14 I look at this, you would now, if you were at your
15 deposition now and knowing what board you were
16 going to face later, you would have argued about
17 this one?

18 COL. HORSTMAN: Sir, I wasn't given the
19 opportunity. I didn't get to ask the questions.

20 JUDGE FARRAR: When they said which of
21 these don't you like, you would have said, if you
22 knew what you were going to face six months or a
23 year ago, would you have at that point said, "I
24 think this should be a Skull Valley accident"?

25 COL. HORSTMAN: No. Because we are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 trying to help them be consistent in defining their
2 little boxes. We don't agree with the category,
3 sir.

4 JUDGE FARRAR: Except this category as I
5 read the long definition that Mr. Soper referred me
6 to, seems like a not unfair category.

7 COL. HORSTMAN: It does. And if you
8 have four hours we can talk about all the
9 mitigating issues.

10 JUDGE FARRAR: I've got six weeks but
11 I'm not spending it on this issue.

12 COL. HORSTMAN: And I understand that.
13 If you are in high altitude, low speed flight, then
14 according to their definition they were correct.
15 We don't dispute that.

16 JUDGE FARRAR: High altitude, low speed
17 puts more stress on an engine?

18 COL. HORSTMAN: No. That's just how
19 they categorized a Skull Valley type event.

20 JUDGE FARRAR: But under my new
21 category, if you were having your deposition today
22 and you had my definitions, you would argue. You
23 would say this one should be in.

24 COL. HORSTMAN: I would say that this
25 ought to be in absolutely.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 JUDGE FARRAR: Mr. Gaukler? He's all
2 yours and I promise not to interrupt again until I
3 can't restrain myself.

4 Q. (By Mr. Gaukler) Lt. Colonel Horstman,
5 I want you to turn to the definition of Skull
6 Valley type event that we have in the report.

7 A. Which report, sir?

8 Q. Tab H.

9 A. Page 14.

10 Q. If you look at the first full sentence
11 in the paragraph on Page 15, it says, "As discussed
12 and defined above," and refers back to earlier
13 discussion, "Skull Valley type event category
14 captures accident caused by events which could
15 reasonably happen in Skull Valley transiting. This
16 includes not only accidents which actually did
17 happen in the flight environment substantially like
18 that in Skull Valley near the PFS, but from other
19 causes which should be considered random or at
20 least not specifically tied to the environment in
21 which they actually happened. Principally among
22 these latter are engine failures, as expected."

23 Now, what in that definition kept you
24 from including this accident in Skull Valley type
25 event if you believe that it could reasonably

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 happen in Skull Valley?

2 A. The next paragraph.

3 Q. And you claim that engine failure such
4 as occurred in that accident report could have
5 occurred in a Skull Valley type flight condition?

6 A. I'm saying that his engine failed and
7 there was no reason for it to fail. Why exclude
8 it?

9 Q. Now, if you take a look at the accident
10 that we talked about yesterday, which you heard
11 Colonel Crosby describe to us.

12 A. Colonel Cosby, yes, sir.

13 Q. And that was an accident that occurred
14 on takeoff; correct?

15 A. No, it did not happen on takeoff.

16 Q. You agree that the -- if you look at PFS
17 Exhibit 79, that is one which we talked about with
18 respect to Colonel Cosby?

19 A. I don't have that. Thank you.

20 Q. There's an accident dated April 21,
21 1993.

22 A. Yes.

23 Q. And if you look at Tab X, PFS Exhibit X
24 Table 1, you notice that the ACRAM phase is
25 identified as takeoff and you have not changed

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that; isn't that correct?

2 A. That is correct. And let me read
3 takeoff and landing for you. "Accident occurring
4 while the aircraft is in the process of taking off
5 or landing, or a takeoff rule, abort or
6 discontinuing, and initial climb; the landing
7 pattern, final approach, flare, rollout portions of
8 the flight; the aircraft crashes within
9 approximately 10 miles of the runway both off and
10 on runway accident are included in the category."

11 You asked if it was a takeoff accident.
12 You didn't ask if it was an ACRAM accident. He was
13 completely through with his take-off phase of
14 flight and was climbing vertically 7000 feet above
15 the field. That is not a takeoff.

16 Q. Now, you, yourself, in your deposition
17 did not, in changing other categories, did not
18 stick to the ACRAM definition. Isn't that correct?
19 When you read certain of the changes in the ACRAM
20 phase, you did not stick to the ACRAM definition.
21 You did not feel bound by it, did you, Lt. Colonel
22 Horstman?

23 A. No, sir. Not at all.

24 Q. When you went through and did your
25 review, you did not feel bound by the ACRAM

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 definition; did you?

2 A. In many cases, no.

3 Q. Okay.

4 A. The question, sir, that you just asked
5 me was, was it during takeoff. You did not ask me
6 whether or not it was in the ACRAM takeoff phase of
7 flight.

8 Q. And you did not change this category
9 here on April 21, 1993?

10 A. Sir, I don't disagree that it is an
11 ACRAM takeoff phase of flight incident. I don't
12 consider climbing vertically straight up with
13 30,000 pounds of thrust above the field a takeoff
14 phase of flight. It is not a landing phase of
15 flight. He was in a high performance mission
16 already. And this takeoff and landing, if I lost
17 an engine 15 miles from the field and crashed
18 within ten miles, we can categorize it as a landing
19 phase of flight. The question you asked me, it was
20 not a takeoff phase.

21 Q. Now, going back to the question, this
22 takeoff landing was engine failure, or this
23 accident was an engine failure; correct?

24 A. Correct.

25 Q. And it was categorized as a takeoff,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 something that occurred, by PFS; correct?

2 A. That's correct.

3 Q. And you didn't take issue with that?

4 A. I don't dispute that based on the
5 definition.

6 Q. And it was also defined or determined to
7 be a Skull Valley type event.

8 A. That's correct.

9 Q. And you didn't dispute that?

10 A. That's correct.

11 Q. Now, I want you to go back and tell me,
12 back to the main definition of Skull Valley type
13 event on Page 14 before we apply that event
14 anyplace, the main one in the definition is on Page
15 11 and Page 12 of PFS Exhibit N where it is
16 defined.

17 A. Can you repeat the question please?

18 Q. The basic definition of Skull Valley
19 type event, regardless of the phase of flight that
20 you put it in, right, is whether this accident
21 could have occurred in Skull Valley; correct?

22 A. That's what this says, yes.

23 Q. And do you disagree with that as being a
24 reasonable basis on which to evaluate the potential
25 hazard to PFS in terms of whether this type of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 accident could reasonably be expected to take place
2 in Skull Valley?

3 A. It is a way to evaluate it.

4 Q. And you, again, you didn't take issue
5 with it. You went through and evaluated it in your
6 declaration, didn't you? You applied this in your
7 declaration; correct?

8 A. That is correct.

9 Q. And you didn't take issue with it in the
10 deposition; did you?

11 A. No, I did not.

12 Q. Now, there's nothing in this definition
13 here that requires a particular result or
14 conclusion one way or the other, is there, Lt.
15 Colonel Horstman, as to whether a particular type
16 of flight should be in or not be out of Skull
17 Valley? It depends on what your reasonable
18 judgment is. Isn't that the case?

19 A. Not necessarily. And I refer you to
20 Page 15. "Such as engine failures caused by flight
21 in a high altitude, low speed condition."

22 Q. Isn't that application of what they
23 believed could happen in Skull Valley?

24 A. Yes, sir. Precisely.

25 Q. And they didn't believe that type of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 accident could happen in Skull Valley?

2 A. Yes, sir. Precisely.

3 Q. But that's their application of the
4 definition; isn't it? That's --

5 A. That is precisely correct. Their
6 judgment.

7 Q. That is their application of the
8 definition of what could reasonably happen in Skull
9 Valley; correct?

10 MR. SOPER: Well, I think the document
11 speaks for itself. The definition is the
12 definition. I don't know what he is asking the
13 witness.

14 JUDGE FARRAR: Well, we will --

15 MR. GAUKLER: He is reading the
16 sentence.

17 JUDGE FARRAR: You can keep going, Mr.
18 Gaukler. Mr. Gaukler knows where he is going and
19 the witness knows where he is going. We will let
20 them both go there and see where we end up.

21 Q. (By Mr. Gaukler) This is clear
22 application of the Skull Valley type event
23 definition as set forth previously. Isn't it?

24 A. Yes, sir, it is.

25 Q. And there is nothing in the Skull Valley

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 type event definition that precludes you from
2 reaching a different conclusion; is there, Lt.
3 Colonel Horstman?

4 A. Yes, sir, there is.

5 Q. Point me to something in the definition
6 on Page 11 and 12 that precludes you from reaching
7 a different conclusion with respect to this
8 accident.

9 MR. SOPER: I object to the form of the
10 question. He is not bound to the deposition and
11 the testimony when the crash report itself, the
12 very document which has all the detail, has the
13 real expanded definition.

14 MR. GAUKLER: I'm referring to the crash
15 report. Mr. Soper, I feel this has been the second
16 time that I have been attacked from behind. In the
17 December 11, 2000, deposition Lt. Colonel Horstman
18 clearly stated he had no problem with Tab H. And I
19 moved to strike his testimony when he came in on
20 declaration identifying 12 accidents with which he
21 took issue. The Board said that it would forgive
22 Lt. Colonel Horstman for that occasion, it probably
23 was an oversight. But I found out in the
24 subsequent deposition he had, indeed, reviewed the
25 accidents in detail before. He changed his

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 position. And now we are in a position again where
2 he is again changing his position.

3 MR. SOPER: Well, I think if you look at
4 his first deposition, you asked him what he
5 reviewed and it shows he only reviewed 12 reports.
6 He didn't have all the reports to review, even, in
7 the first deposition.

8 Q. (By Mr. Gaukler) Lt. Colonel
9 Horstman --

10 JUDGE FARRAR: Wait. I'm at a little
11 bit of a disadvantage because I was not the
12 chairman of the Board when all that was going on.
13 So I'm a little behind. Mr. Gaukler, I understand
14 your concern with how you view the earlier phases
15 of the proceeding and that concern may or may not
16 be valid. I have no way to evaluate it at this
17 point, given that I wasn't around then. But to the
18 extent Mr. Soper's objection went to the way you
19 framed the last question to the witness, which
20 restricted the definition to some reference you
21 gave, he has several times referred to something on
22 Page 15 of Tab H which looks to me like a fair or
23 which looks like material that was fairly included
24 by your consultants in their definition. And if
25 that's the part of the definition that he thought

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 he was bound by at that point, and now feels we
2 have given him the freedom not to be bound by it,
3 it's unfair to ask him a question based on some
4 other definition. He has several times said this
5 is the thing that he thinks frees him from the
6 limits that were placed on him before. So I think
7 we need to deal with that.

8 MR. GAUKLER: Let me take a break, okay?

9 JUDGE FARRAR: Last night we finally
10 agreed we were all done, we could all use a break
11 to reconnoiter with our respective little groups.
12 Given, Mr. Gaukler, all that has happened here in
13 the last 45 minutes, are we going to finish Colonel
14 Horstman today?

15 MR. GAUKLER: I don't know. I think we
16 will but I don't know.

17 JUDGE FARRAR: Okay. It's a couple
18 minutes after 3:00. Let's be back at 3:15.

19 (Discussion off the record.)

20 JUDGE FARRAR: On the record. We have
21 had a couple things come up during the break which
22 is why we are a little late reconvening. Let's
23 take the simplest one first. The question has come
24 up about the schedule for filing proposed findings
25 and conclusions. I know on the schedule that Judge

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Bollwerk had put out and you had all agreed to, you
2 had environmental contentions and safety
3 contentions and they were on different tracks and
4 so forth.

5 But what I had noted some time ago was
6 that both of those tracks converged on April 26.
7 We were supposed to have a three-week hearing - and
8 I don't know who was thinking about that - a
9 three-week hearing that would end on April 26 and
10 you picked or the dates for filing the first of all
11 parties' finding and conclusions looked to me like
12 it was six weeks after that date. And then the
13 replies were four weeks after that date.

14 I have been assuming ever since we went
15 to a six-week hearing, a five or six-week hearing,
16 that when that hearing was over, not when a
17 particular contention was over, we would give you
18 six weeks and four weeks from that date. So in
19 other words, I view this as one hearing even though
20 it is two environmental and two safety issues.

21 So if no one has any objection, our plan
22 would be, whatever day we finish in May - in May,
23 not June - we would do six weeks and four weeks
24 from then.

25 Mr. Silberg, I overheard discussion you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 were having with someone; what about if there's an
2 out-issue where something is left open and we are
3 going to come back for a day four weeks later. My
4 thought would be that wouldn't count; we would go
5 ahead with the six weeks and the four weeks and we
6 would just have to force that extra day in and you
7 would have a couple weeks after that to finish up
8 your six weeks.

9 MR. SILBERG: I agree.

10 JUDGE FARRAR: I can't speak to
11 Security, Jay. That's separate. That's for Judge
12 Bollwerk. But he has you on a summary disposition
13 schedule and I think he would expect to rule on
14 summary disposition. And does he have another
15 pending issue on financial?

16 MR. GAUKLER: Financial qualification
17 and decommissioning.

18 JUDGE FARRAR: I assume those would all
19 be done before ours.

20 On Commission policy they talk about 60
21 days or two months after all the papers are in, and
22 we certainly intend to meet that, whenever that is.
23 So whenever anyone has asked me or asked our press
24 people when our decision will be out, we have
25 always been saying late or the latter half of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 September. So that's that matter. Hearing no
2 objection, when we come to the end of the hearing
3 we will pick the precise dates and work around a
4 couple of holidays and stuff.

5 On the matter that came up, the other
6 matter that came up was the matter of this
7 witness's prior two depositions. And, again, I'm
8 at a little bit of a disadvantage, not having been
9 the warden at that time. It seems to me the
10 parties have discussed that. The State has been
11 forth- coming about some clarifications about just
12 what Colonel Horstman had in his possession at the
13 first deposition, which was less than he had in his
14 possession at the second deposition. And they
15 didn't want Counsel from the Applicant not to be
16 aware of that information.

17 Then we threw in that if evidence has
18 been derived or has been developed on the basis of
19 the Applicant's consultant's definitions and then
20 our questions have led to the possibility that the
21 end result would be deciding the case based on
22 different definitions, we wouldn't want any party,
23 just like this morning when the Staff was talking
24 about possibly new material, we don't want anyone
25 to be disadvantaged by changes that caught them off

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 guard or unawares. So we are willing to make
2 accommodations in schedules and parties,
3 opportunities to be heard that would make sure that
4 everybody gets things fully developed.

5 There are some times in cases where
6 things are not significant enough to make dramatic
7 changes. I think anyone who has been here this
8 week realizes we are talking about an important
9 facet of an important issue and we want to make
10 sure everybody is fairly heard. Mr. Turk had
11 volunteered something from the regs, but I don't
12 know if it is necessary to mention that.

13 MR. TURK: I don't think it is necessary
14 now, but I do have a possible solution that would
15 eliminate the need for any further consternation.
16 While we were off the record I asked Ms. Nakahara
17 whether, in view of the fact that the issue of
18 whether the definition was correct had just been
19 raised for the first time, that since it is a new
20 issue would the State object if we simply eliminate
21 that as an issue; just withdraw the claim that the
22 definition is incorrect and go back to the issues
23 in the case as they were previously. And Ms.
24 Nakahara informally indicated that she wouldn't
25 object to that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. NAKAHARA: I don't speak for both of
2 us.

3 JUDGE FARRAR: Which definition?

4 MR. TURK: In his cross-examination, Lt.
5 Colonel Horstman is raising the issue of whether
6 PFS properly established the different bins;
7 whether the definitions are correct.

8 JUDGE FARRAR: He didn't raise it. I
9 raised it.

10 MR. TURK: I heard it in his answer in
11 the emphasis and tone, "According to the parameters
12 I was given," underline "given", "by PFS." And
13 then we branched off into what does that mean.

14 JUDGE FARRAR: Right. But what, Ms.
15 Nakahara, were you offering to withdraw?

16 MS. NAKAHARA: No.

17 MR. SOPER: Mr. Turk was proposing some
18 sort of stipulation to get around this issue. I'm
19 not sure that there is a workable way around it.
20 It seems to me that it has to be developed by --

21 JUDGE FARRAR: If you all can develop
22 something, that's fine, except for this: There's
23 some data on the record that shows something. We,
24 the Board, are required to look at that. And in
25 our first look at it we didn't understand some

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 categorizations. I don't know that you can
2 stipulate -- well, I guess you can --

3 MR. TURK: If the parties agree, we can
4 stipulate that the issue is not a contested issue
5 amongst us. And we can also move to strike
6 testimony that presents it as an issue.

7 JUDGE FARRAR: Whose testimony would you
8 strike?

9 MR. TURK: Whichever testimony it was,
10 Lt. Colonel Horstman's, apparently, that goes to
11 the challenge to the definitions. And then what
12 the Board would face in writing a decision is
13 looking at those definitions that PFS has
14 established and understanding what they are. In
15 other words, keep in the testimony that explains
16 what the definitions are. You would then reach a
17 decision on the contested issues which I think
18 would be, in effect, accepting those definitions,
19 unless the Board raises an issue of its own.

20 JUDGE FARRAR: Which I think we were
21 doing at great length. Not as the Board's -- not a
22 sua sponte issue or the Board's motion. But given
23 the way the case was presented to us it didn't
24 quite come together. In trying to search for why
25 it didn't come together, and thinking we were

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 asking a simple question, it turns out there's some
2 good reason why it wasn't hanging together. And
3 now that we have that on the record, I don't know
4 that you can ask us to write a decision based on
5 something we were -- questions being fairly
6 developed, not on our own motion but as an out-
7 growth of the party's taken raised questions about
8 it. Now, I thought the remedy was Mr. Silberg and
9 Mr. Gaukler said they would come back and bring the
10 panel back and have redirect and perhaps
11 re-establish those definitions.

12 MR. GAUKLER: I believe our panel can
13 definitely explain the basis of the definitions and
14 a rational basis for it and why certain accidents
15 are in and certain accidents are out. And we are
16 going to have to bring them back for rebuttal.
17 That's clearly the case.

18 JUDGE FARRAR: And I told you a long
19 time ago how I feel right now is not how I will
20 necessarily feel in August. They may come back and
21 re-establish this and that's fine. But I think
22 that's a better practice than saying you'll
23 stipulate away something that appears to be a
24 serious matter in the case.

25 I suppose if the State wants to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 stipulate that under today's rules, if the State
2 stipulates that the R factor is legitimate, I guess
3 we don't have an issue to decide. They are free to
4 stipulate under the old rules. My old colleague,
5 Jack Buck, would have rapped several gavels and
6 said, "Nothing doing. I, Jack Buck, have a problem
7 with that," and we would have been lunched on sua
8 sponte review. If you stipulate away the R factor
9 and say it is valid, fine. We will decide the case
10 and say the R factor is fine. But right now I
11 think there is evidence that there is some problem
12 with that.

13 MR. LAM: Now, it seems to me that
14 there's no need to stipulate anything at this stage
15 of the proceeding. I think the Applicant had used
16 a definition and had already proffered the analysis
17 and had the fully developed analysis on our record.
18 Whatever challenges Lt. Colonel Horstman had
19 presented, it would be viewed as a challenge and it
20 is also fully developed in our records, so in the
21 prefiled testimony. To the extent that both
22 parties disagree then the Board, we probably have
23 to look at the differences and rule on the merits.

24 JUDGE FARRAR: I guess in light of what
25 Judge Lam has said, I'm confused, Mr. Turk, with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 what you want the State to or what the proposal was
2 the State would stipulate to.

3 MR. TURK: Well, I think we would have
4 to go back and look at the testimony that was
5 filed. The direct testimony.

6 JUDGE FARRAR: Of?

7 MR. TURK: Of all three parties. If the
8 issue of definition of the bins was not raised in
9 the direct testimony, then it really has no place
10 before you as an issue in the case, particularly if
11 it's not mentioned in the contention itself or in
12 the discovery responses. But this is a very -- I
13 have to admit this is an idea that came to me off
14 the top of my head. And Lt. Colonel Horstman is
15 better than me at saying something may not come to
16 him off the top of his head, but this one came to
17 me and I voiced it.

18 JUDGE FARRAR: My problem is in the old
19 days sua sponte review meant here was a record, in
20 came the application, the SER, the environmental
21 impact statement, and nobody raised an issue about
22 something, and the Board said, "Ah-ha. Here is a
23 problem. Nobody has raised an issue but, boy, we
24 want some evidence on this. We've got to have some
25 answers." And we no longer have the authority to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 do that. And we are happy with that. That's not a
2 problem.

3 But here, on a contested issue, the
4 Applicant comes in and says, "Here is my evidence
5 that justifies my position on the contested issue
6 the State is coming in with." We certainly have
7 every right to look at that evidence that's
8 presented to us and say, "We don't buy that
9 evidence." I'm not saying we don't buy the
10 evidence. But we have a right, on anything that
11 they think goes to the contention, to say we don't
12 accept that. Now, if somebody wants to argue that
13 we don't have that right anymore, then we will have
14 an argument or we better have an argument on that
15 and better certify that to the Commission.

16 MR. SILBERG: I think, if I'm right,
17 Judge Farrar, it seems to me that if there were a
18 stipulation, it could certainly be accommodated
19 merely by, in essence, amending the contention. If
20 an issue is outside the scope of a contention, then
21 it is outside the scope of a contention and this
22 Board's authority. And I'm talking in a
23 theoretical sense and not with respect to this
24 issue or any other issue. It would be possible for
25 the parties to stipulate that Contention A no

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 longer includes Issue Z.

2 JUDGE FARRAR: Are you suggesting that
3 Contention -- what is this? K?

4 MR. SILBERG: K.

5 JUDGE FARRAR: Does not include a
6 challenge to the R factor?

7 MR. SILBERG: Correct. That would
8 certainly be an appropriate contention definition
9 if the parties chose to do so. This may be a
10 totally academic discussion, but if there is a
11 way --

12 JUDGE FARRAR: Just a minute. Off the
13 record.

14 (Discussion off the record.)

15 JUDGE FARRAR: Are you prepared to
16 stipulate away the R factor?

17 MR. SOPER: No. I think without
18 conversation with my client, your Honor, I'm
19 confident that would be a decision that the State
20 would not be in a position to stipulate to in this
21 matter.

22 MR. SILBERG: I thought the discussion
23 was some definitional issues. Hardly the R factor.

24 JUDGE FARRAR: No. These are the
25 definitional issues that go right to the heart of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the R factor.

2 MR. GAUKLER: Your Honor, if I could
3 tell you where I'm coming from and why I went into
4 that series of questions.

5 When I was -- there's two parts to the R
6 factor, as your Honor knows. There's the 90
7 percent in terms of able to avoid, and there is the
8 95 percent of those in control that would, in fact,
9 avoid. And this table that we have been talking
10 about, Table 1, which is PFS Exhibit X, goes to the
11 first factor, the 90 percent factor; those pilots
12 who are in control of their plane and able to avoid
13 the site. It doesn't go to the second part of that
14 factor which is those or that the pilots in that 90
15 percent would, in fact, avoid the site.

16 (Board confers off the record.)

17 JUDGE FARRAR: Go ahead, Mr. Gaukler.

18 MR. GAUKLER: And I had gone through, I
19 had, after my deposition with Lt. Colonel Horstman
20 in January, I thought I had here in this exhibit
21 the extent to which they took issue with the
22 determination of our 90 percent factor.

23 JUDGE FARRAR: And that's fair that you
24 felt that way.

25 MR. GAUKLER: And as a matter of fact,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 when I first asked them my question, I went through
2 this and asked if that still was the case. And I
3 asked them when we went to Section 6 of his
4 testimony if it was correct to conclude that his
5 disputes with respect to the PFS analysis of
6 accident reports were these as reflected in this
7 exhibit. And I understood that they were.

8 And now it suggests or he is suggesting
9 that there is something that is not written in the
10 testimony that takes issue with the analysis of the
11 accident report, which I don't find in their
12 testimony. They don't make any reference to a
13 definitional issue in terms of the testimony. So
14 it really seems to me that this is almost an issue
15 that is being raised right in the course of the
16 hearing itself.

17 JUDGE FARRAR: I fully subscribe to what
18 you just said and how you feel about potential
19 invasion of your client's rights. But to be fair
20 to the State, Colonel Horstman didn't raise this on
21 his own. He raised it in response to some pointed
22 questions by the Board. Mr. Soper and Ms. Nakahara
23 didn't come in and say, "Ah-ha. We are losing the
24 case. We have a new strategy to come up with some
25 brand new theory that has never been developed."

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Colonel Horstman has simply responded to the
2 Board's questions.

3 So while I understand how you feel and
4 your need to protect your client's rights, which is
5 important, the source of your problem is not any
6 change -- I don't necessarily see it as a change in
7 position by the State. I see it as us asking
8 questions on a contention that was presented to us
9 that challenged factor R, and on the basis of that
10 challenge us looking at the evidence that you put
11 forward on R.

12 Now, if that says you haven't had time
13 to prepare for the questions we are raising about a
14 contention that is squarely before us, a contention
15 that is, to my way of thinking - and I have only
16 been back here eight months - one of the more
17 important contentions the Nuclear Regulatory
18 Commission has faced, if you need more time to
19 prepare with that contention, we are happy to give
20 it to you.

21 MR. SILBERG: I think the issue,
22 frankly, is whether we are seeing on the witness
23 stand a different position than was expressed under
24 oath on depositions.

25 MR. SOPER: That's not at all the issue.

1 I think the judge has articulated it and I wish we
2 wouldn't go to that argument, because that's
3 exactly what it is.

4 MR. GAUKLER: I guess I would like to
5 ask a few more questions in that respect.

6 JUDGE FARRAR: We will do this. There's
7 been a shift in the emphasis on the case because of
8 our questions. In response to our questions,
9 Colonel Horstman has made some statements. He has
10 made other statements on several previous
11 occasions, a couple depositions, a declaration.
12 You are free to ask him anything that impeaches the
13 answers he gave today, impeaches the answers he
14 gave any time. And if you are not satisfied at
15 that point, we will give you more time. Assuming
16 that we have the luxury of the sixth week, we will
17 give you more time to prepare your case. I would
18 ask, since we would certainly like to finish at
19 least this aspect of this case today, and since we
20 are so involved in it, it might help us understand
21 better to ask him what he thinks today and then
22 say, "Ah-ha. Here is what you said the other day.
23 Why is that different?" Let's take it in that
24 order rather than what did he say before. Let's
25 start with what -- let's start with what he thinks

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 now and then impeach him on what he said before.

2 Before we get to that, Mr. Soper, who is
3 your client? What official of the state of Utah is
4 your client? You said you had to consult with your
5 client.

6 MR. SOPER: Well, actually what I said,
7 your Honor, is I'm confident without consulting
8 with my client that they would not be in a position
9 to stipulate on this matter.

10 JUDGE FARRAR: But who is your client?

11 MR. SOPER: I directly would talk to
12 Diane Nielsen, who reports to the governor.

13 JUDGE FARRAR: She is the head of DEQ or
14 whatever you call it here?

15 MR. SOPER: She is.

16 JUDGE FARRAR: Hold on a second.

17 (Board confers off the record.)

18 JUDGE FARRAR: Mr. Gaukler, I think we
19 are ready to proceed.

20 MR. GAUKLER: Okay. Just wanted to go
21 back and clarify a few things so the record is
22 clear.

23 Q. (By Mr. Gaukler) Lt. Colonel Horstman,
24 some questions have come up exactly when you
25 reviewed accident reports, et cetera. And in my

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 December deposition of you, we talked generally
2 about Tab H and you expressed no disagreement with
3 that. I did not ask you at that time whether you
4 had reviewed any accident reports; correct?

5 A. I think so.

6 Q. And then we, in the July 27, 2001
7 deposition, which was a supplemental deposition for
8 the specific purpose of deposing you with respect
9 to your review of the accident reports, I did ask
10 you that question. And will you look at Pages 9
11 and 10 of the July 27, 2001 deposition. Do you
12 still have that?

13 A. Yes. Which one?

14 Q. July 27.

15 A. What pages?

16 Q. On 9 and 10.

17 A. Okay.

18 Q. I asked you there, if you review it,
19 "With respect to the F-16 accident reports that
20 were reviewed by PFS in this matter which are
21 reflected in Tab H, when did you first review those
22 reports?"

23 And your answer was, "I don't know the
24 exact date. It's when the State provided them to
25 me."

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 "And when would that be about,
2 approximately?"

3 And you said, "Last year."

4 "So the year 2000?"

5 "Exactly, I don't recall."

6 And then I asked, "Was it before or
7 after the deposition we had in December?"

8 And you said, "Before."

9 And I said, "Before?"

10 And you said, "Yes."

11 And then I asked you to undertake, "Tell
12 me, will you describe for me your review of the
13 accident reports at that time?"

14 I had understood those series of
15 questions and answers to mean to me that you had
16 reviewed all of the accident reports prior to your
17 December deposition. Was that an incorrect
18 assumption on my part?

19 A. No, sir, it was not.

20 Q. You had reviewed them all prior to that
21 time?

22 A. I'm sorry. Ask it again, please?

23 Q. Based on that series of questions and
24 answers, I had assumed that you had reviewed all of
25 the accident reports listed in Table 1, PFS Exhibit

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 N, prior to your December 11 deposition. Very
2 clear about the December 11, not the July 27.

3 A. Yes.

4 MR. TURK: For context, could you read
5 the answer to the last question that you asked in
6 the July deposition?

7 MR. GAUKLER: "And will you describe for
8 me your review of the accident reports at that
9 time?"

10 MR. TURK: And the answer?

11 MR. GAUKLER: "I read all the accident
12 reports and looked at how they were portrayed or
13 categorized, what type of incident, whether it was
14 inflight or on the ground. Those are the kinds of
15 things for the categories of all the reports."

16 Q. (By Mr. Gaukler) Now, my basic question
17 is I had assumed, based upon that series of
18 questions and answers, that you had reviewed all
19 the accident reports in Table 1 of Tab H prior to
20 your first deposition in December of 2000. I just
21 want to know was I wrong in that assumption?

22 A. I had not reviewed all the accident
23 reports prior to the December deposition.

24 Q. You had not? You had reviewed all the
25 accident reports prior to your July 27 deposition,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 2001; correct?

2 A. Yes, sir.

3 Q. And marching through the various -- and
4 you identified in your deposition the various
5 aspects in which you took issue with the
6 categorization of those accident reports.

7 A. That's correct, sir.

8 Q. Now, when you undertook that review, did
9 you -- well, first of all, we have been talking a
10 lot about the March 16, 1990 flight which you say
11 should be a Skull Valley type event? You looked at
12 that table?

13 A. Which one?

14 Q. March 16, 1990, which was an engine
15 failure which you think should be a Skull Valley
16 type event?

17 A. I'm not sure that I said that, based on
18 this.

19 Q. Well, I thought you said that was
20 something you should have considered and you would
21 include it in the Skull Valley or it could happen
22 at Skull Valley and therefore we should consider
23 it.

24 A. When I reviewed these before, back for
25 the July deposition, I went under the assumption it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 was to try to determine whether or not a specific
2 accident would fall within the bounds of the
3 category that was described to me in the documents.
4 Based on that analysis back in or before July, I
5 did not believe that the accident you are
6 discussing should be moved into Skull Valley
7 because I didn't think that it fell within the
8 parameters as described in the documents that I had
9 received, sir.

10 Q. And now you are saying it is something
11 that could occur in Skull Valley? Is that what I
12 understand you to say?

13 MR. SOPER: That mischaracterizes his
14 testimony.

15 Q. Well, you think this accident now could
16 occur in Skull Valley and therefore should be
17 considered?

18 MR. SOPER: Under your definition? We
19 are back to the same problem. It needs to be
20 clearer on the record, sir.

21 JUDGE FARRAR: One at a time, and not at
22 each other.

23 MR. GAUKLER: I'm asking as he sits here
24 today, putting to one side all definitions, whether
25 or not you believe that this accident should be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 considered --

2 MR. SOPER: Did you say putting aside
3 all definitions?

4 MR. GAUKLER: Putting aside all
5 definitions.

6 JUDGE FARRAR: "All" or "our".

7 MR. GAUKLER: PFS's reports, as in the
8 documents. He is not bound by the definitions set
9 forth in our report.

10 A. In that case I believe this accident
11 should be considered a Skull Valley type event.

12 Q. (By Mr. Gaukler) And you would agree
13 that that would actually decrease the hazard to
14 Skull Valley since this or the conclusion here was
15 that the --

16 A. I have absolutely no idea what it would
17 do, sir, quite honestly.

18 Q. Didn't you review this and show this was
19 able to avoid accident?

20 A. My goal here, sir, is to try to be as
21 accurate with the information I have as possible to
22 determine ethically, with integrity, whether any of
23 these columns should be yes or no.

24 Q. And when you reviewed this in terms of
25 whether the plane in this category could avoid the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 PFSF site, did you disagree with the conclusion
2 expressed with respect to this accident, that this
3 plane could avoid the PFSF site?

4 A. That's a different question. So 16
5 March, 1990 was the accident.

6 Q. Right.

7 A. And you are asking if I would change the
8 able to avoid PFSF? Is that correct? I'm still
9 not quite --

10 Q. Yes. As you are sitting here today,
11 putting aside any definitions that we provided to
12 you.

13 A. If you give me a second, I want to give
14 you a good answer, sir.

15 Sir, regardless of the rules or
16 categories, I believe that that pilot, given the
17 opportunity, would have been able to avoid the PFSF
18 site.

19 Q. So you agree with the classification
20 able to avoid, regardless of the definition used in
21 that classification?

22 A. Yes, sir, I do.

23 Q. Now, so in fact your claim that this
24 should be a Skull Valley type event actually would
25 reduce or would increase, if you took everything

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 else to be the same, the probability that our
2 experts --

3 A. I didn't do the numbers. If these are a
4 hundred percent yes or no, I haven't tracked that.
5 I have no idea.

6 Q. Now, looking at the category ACRAM
7 phase, what did you feel that you were bound by
8 when you reviewed the accident reports with respect
9 to phase of flight? If you would go back and look
10 at -- I guess why don't we go back to the source
11 document, the Tab H?

12 A. And I have that in front of me, sir.

13 Q. Okay. The ACRAM flight phase, assuming
14 we look on Page 9 and 10.

15 A. I have that in front of me. And the
16 question again? I'm sorry.

17 Q. And now, you state that you felt bound
18 by these definitions here and this affected your
19 evaluation. Correct? Is that what you are saying
20 today?

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

22 Q. Now, what did you take the definition of
23 ACRAM flight phase to be and how did that bind you,
24 for example, in various -- in your evaluation? Are
25 you saying you were bound by ACRAM's definition and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you couldn't use what you would consider to be your
2 own definition?

3 A. I tried as best as possible to
4 categorize the events as they are written down in
5 this --

6 Q. Did you feel bound by the ACRAM
7 definition as opposed to using your own definition?

8 A. No. In some cases we asked to change
9 it, and you all have agreed. There were a few
10 accidents that we disagreed with and your Staff had
11 reviewed those and agreed that it could be a
12 different type of event.

13 Q. There's one such accident, correct, out
14 of the twelve?

15 A. Yes, sir.

16 Q. Okay. Now, that wasn't a change of
17 definition but it was a change of the application
18 of the definition; wasn't it? We can come back to
19 that later if you don't know the answer.

20 A. That's a difficult question and I'll
21 have to think about it.

22 Q. Think about that and I will ask you
23 later.

24 A. Thank you.

25 Q. But my point is do you feel bound by the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 ACRAM definition of the flight phase as set forth
2 in Pages 9 and 10?

3 A. "Bound"? We disagreed on interpretation
4 of a number of the accidents as far as whether they
5 should be categorized as A, B, or C. So feeling
6 bound by --

7 Q. Was that based upon your belief that the
8 definition should be different than the definition
9 used in ACRAM?

10 A. Can I look up something?

11 Q. What source document are you referring
12 to?

13 A. I don't know. When I get it I will let
14 you know.

15 Q. You are looking at what document?

16 A. I'm just trying to cross reference an
17 example for you.

18 Connie, can I ask you to get me
19 something, please?

20 MS. NAKAHARA: Sure.

21 COL. HORSTMAN: The 29 January, '97
22 accident report and the 16 September, '97 report.

23 MS. NAKAHARA: What was the last one?

24 COL. HORSTMAN: 16, September, '97.

25 MR. SOPER: I forget how long it's been

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 since we had a break. Is this a convenient time?
2 We can do double duty on the time.

3 JUDGE FARRAR: I'm glad you just said
4 that because I just asked the backup court reporter
5 if she minded waiting because we had just had
6 interruption and an intense discussion and we were
7 following up. But if this break is going to be
8 more than another ten seconds, it would be a great
9 time to switch reporters. So let's do that. We'll
10 go off the record.

11 JUDGE FARRAR: I think we have all the
12 necessary people back. During the break the
13 witness had a little bit of a chance, I think, to
14 look at some -- review some accident reports.
15 While we were off the record Mr. Silberg suggested
16 we shoot for six o'clock as a quitting time since
17 it's obvious we can't finish either with this
18 witness or with any other significant phase of the
19 case, then we've worked long and hard and it gets
20 harder every day. So let's go to 6:00, more or
21 less. Mr. Gaukler, we'll leave it to you to pick a
22 good stopping point before or after 6:00 and then
23 we'll just have to pick up in the future.

24 COL. HORSTMAN: If you want me to answer
25 the question I'm prepared.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Q. (By Mr. Gaukler) Okay.

2 COL. HORSTMAN: As I understand it --
3 well, let me just start. There's an accident that
4 occurs on 13 -- let me get the right page -- it
5 occurred on the 29th of January 1997 and it's in
6 Arizona. A pilot is on the bombing range and he
7 has just egressed the target. He's still at high
8 speed and he could be considered bombing or he
9 could be considered normal flying. His engine
10 fails abruptly at 12.5 miles from an emergency
11 airfield. So the pilot elects to try to make it to
12 the emergency airfield and he impacts approximately
13 2.5 miles from the airfield. So as in the
14 testimony of the three -- testimony of Cole,
15 Jefferson and Fly, Sirs, they state, "As previously
16 noted, this is a definitional issue." What phase
17 of flying was this in? And it's a judgment call.

18 The aircraft landed within 2.5 miles of
19 the airfield it was trying to reach. So therefore
20 it could be considered a takeoff/landing. The
21 aircraft was on a bombing range and had just
22 finished employing ordnance so it could be
23 considered special inflight. The way I consider
24 that is he was finished with his bombing run and
25 from the pilot's perspective, the accident occurred

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 2.5 miles from the landing runway that he was
2 attempting to gain.

3 Normal inflight is accidents occurring
4 during blah, blah, blah. A takeoff/landing is an
5 accident occurring while the aircraft is in the
6 process of taking off or landing. We could have
7 made a contention that this was in special
8 inflight. It's a judgment call based on your
9 background.

10 If I live near Gila Bend it would have
11 been a landing accident. If I was the range
12 officer scoring bombs on the range, it would have
13 been a range bottom. I'm not a pilot. I'm not
14 dropping bombs, I'm egressing 550 knots, which is
15 relatively -- in a fighter aircraft no big deal.
16 It could be normal. It happened far enough away
17 from an airfield that it wasn't in that category,
18 but the aircraft deposited itself within that
19 category. So that's the first accident.

20 The second accident --

21 .Q. Can I ask you some questions about the
22 first accident before you go on to the second?

23 A. Yes, sir.

24 Q. I just want to make sure I understand
25 this. I don't want to confuse the two accidents

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and make sure I understand what you did on that
2 accident.

3 A. Okay.

4 Q. Now, that accident, you say, you would
5 consider that to be a normal accident?

6 A. I would have considered it, yes.

7 Q. And when you went through and reviewed
8 -- now, did you feel bound by our definition or
9 application of the definition in any respect?

10 A. I'm trying to fit my judgment into the
11 criterias that I was given.

12 Q. Putting all of those definitions aside,
13 okay?

14 A. Okay.

15 Q. Putting aside any definitions in our
16 report, how would you characterize this accident,
17 as special operations, normal or landing?

18 A. All three.

19 Q. All three.

20 A. It could be considered all three, sir.
21 I mean --

22 Q. Which one do you consider it in your
23 professional opinion in terms of --

24 A. I would consider it normal inflight,
25 sir.

1 Q. Okay. And if you look at the table on
2 Table 1, January 29, 1997, you actually changed it
3 to normal, correct?

4 A. That's correct, sir.

5 Q. Go on to the second one.

6 A. Okay. The second one is an accident --
7 (The Board conferred off the record.)

8 COL. HORSTMAN: The second accident
9 occurred on September 16, 1997. The accident
10 occurred -- the aircraft had made an initial climb
11 to 7,000 feet, leveled off, and then began another
12 climb to 14,000 feet and had a midair collision.
13 The category that we received was a takeoff and
14 landing accident and takeoff and landing includes
15 initial climb. We believe -- I'm sorry, I believe
16 that this is more of a climb cruise which is a
17 normal inflight accident.

18 So, again, it's definitional because
19 where an initial climb ends depends on a number of
20 factors. If you have an unlimited climb, normal
21 angle of climb to 35,000 feet, where do you change
22 from initial climb to climb cruise, you know, where
23 do you change that? Is it at 35,000 feet? If
24 there's a level off at 30 seconds and then you
25 climb again, is that a secondary climb? And so

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it's, again, a definitional issue.

2 Q. (By Mr. Gaukler) So apart from any
3 definition that PFS provided, how would you
4 classify this flight?

5 A. It's a normal inflight, sir.

6 Q. And looking at Table 1, and that's
7 number
8 116, September 16, 1997 accident, on Table 1 of PFS
9 Exhibit X?

10 A. Yes.

11 Q. So you classified it as normal there,
12 correct?

13 A. Yes, sir.

14 Q. Now, if you would look at the June 8, 19
15 -- well, look at the categorization of the June 8,
16 1991 accident, if you would, please.

17 A. Okay.

18 Q. And that one PFS classified it as
19 landing, you changed it normal, correct?

20 A. Yes. Connie, can you please get me the
21 8 June 1991 accident report, please?

22 Q. And I also want you to look specifically
23 at your deposition of July 27 at page 89. I think
24 maybe the definition will be sufficient if you look
25 at page 89 of the deposition of July 27.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. I have it.

2 Q. Now, that accident, we were talking
3 about the basis of your disagreement of PFS that
4 this was a landing accident. Do you see that?

5 A. I see that.

6 Q. And I asked you specifically there --
7 you said this accident should be defined as normal,
8 correct? If you want to take a look at the
9 accident, feel free to do so.

10 A. Yes, I would like to do that.

11 Q. Go ahead.

12 MS. NAKAHARA: Your Honor, may I
13 approach the witness with the investigation report?

14 COL. HORSTMAN: I have reviewed it, sir.

15 Q. (By Mr. Gaukler) Okay. Now, how would
16 you classify the June 8, 1991 accident?

17 A. As a normal inflight.

18 Q. And that's based upon your evaluation of
19 the remaining parts definition that we provided? I
20 mean putting aside PFS's definition, you would
21 classify this as normal; is that correct?

22 A. I can't put aside that. One has to
23 follow with something. Maybe there's a --

24 Q. Okay. But how would you classify this
25 accident? You're saying you were bound by PFS's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 definition. I'm saying, putting aside whatever you
2 felt you were bound by PFS's definition, how would
3 you classify it?

4 A. Well, if I was a fighter pilot flying
5 fighters I might have a dozen different
6 definitions, and I haven't come up with those. So
7 what I have tried to do, sir, is look at your
8 definitions and fall inside of those. And let me
9 explain. A landing accident --

10 JUDGE FARRAR: Wait a minute. He said
11 put aside their definitions. And I take it, Mr.
12 Gaukler, you mean by that if someone comes up to
13 you on the street and says, "Where did this
14 accident happen"?

15 MR. GAUKLER: Was it normal phase,
16 normal cruise phase of flight, was it takeoff or
17 landing or special operations.

18 MR. SOPER: Can I just ask for a
19 clarification? He's not asking the witness how he
20 came up with his change to this Exhibit, he's
21 asking for a totally different answer.

22 JUDGE FARRAR: That's how I understood
23 it, but I couldn't --

24 Q. (By MR. Gaukler) Yes. I want his
25 answer fully apart from any definition that we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 provided.

2 A. I would call it on the initial approach
3 portion of the flight segment.

4 Q. And that would be what phase of flight,
5 normal --

6 A. I'm not using yours.

7 Q. Okay.

8 A. The categorization that I would make is
9 not within these definitions. And let me expand.
10 The definition that I was trying to use for the
11 takeoff and landing is a landing pattern which is
12 not in effect here; final approach, flair and
13 rollout portions of the flight. So what is final
14 approach? It depends on who you are.

15 As a pilot I'm required to follow the
16 flight -- or the SARs issued by the FAA. The final
17 approach segment of the approach is defined
18 specifically in every approach plate and it's,
19 generally speaking, 900 feet above the airfield.
20 That's not always the case. It's a precision
21 approach, it's published by the FAA on every single
22 runway. That is a final approach. They were
23 intending to fly nonetheless. So it didn't happen
24 then. The aircraft landed there, but that's not
25 when the event happened. It landed within 10 miles

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 so it could be considered that. On the other hand,
2 this should be cruise descent, according to the
3 definitions of flying that I understand. Again, a
4 definitional issue.

5 Q. And that would normally be considered
6 cruise or normal flight, do you agree?

7 A. We asked for it to be moved from the
8 landing to normal inflight category, sir.

9 Q. That was based upon your understanding
10 of what you thought it should be fully apart from
11 our definitions; isn't that correct?

12 A. I don't know how to answer that with
13 "fully apart from our definitions."

14 Q. Well, was it apart -- I mean, why don't
15 you go to your deposition on page 89. And do you
16 see where I ask you, you've got down -- well, let's
17 go back to the previous page where we're talking
18 about this accident. And I think on the bottom of
19 page 88 you spoke of some of your rationale for why
20 you would classify it this way, and on to 89.

21 A. (Reviewing document.)

22 Q. And do you see in the middle of page 89
23 where I say, "Do you know whether your definition
24 is consistent with ACRAM? How would you categorize
25 this accident?" And your response is?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. "ACRAM calls it a landing. We believe
2 it's a normal inflight because of what had
3 happened."

4 Q. So in that instance you didn't believe
5 you were bound by ACRAM, correct?

6 A. I've got two competing definitions.

7 Q. I'm asking you a question. Did you feel
8 bound by ACRAM?

9 MR. SOPER: Well, he's trying to explain
10 it. I think the witness ought to be able to answer
11 it however he wants.

12 COL. HORSTMAN: I felt bound by ACRAM to
13 choose one of the categories available.

14 Q. (By Mr. Gaukler) Do you know whether
15 your characterization of this as normal as opposed
16 to landing would be consistent as that term is
17 used?" Will you read your response, please?

18 A. "We believe it's consistent with normal
19 inflight except that it crashed within 10 miles of
20 the runway. They weren't in their initial climb,
21 they were not in the landing pattern, they were not
22 on final approach, they were not in flair or
23 rollout."

24 Q. I would like to have you go to page 104
25 of your deposition. And there if you look above to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 page 103, do you see we're talking about the July
2 31, 1992 accident?

3 A. Yes.

4 Q. And if you look at the line 49 on Table
5 1, do you see that PFS classified the July 31, 1992
6 accident as takeoff?

7 A. I see that.

8 Q. And you changed it to normal?

9 A. That's correct.

10 Q. And I asked you on page 104 with respect
11 to this accident, "Now, to what extent, to what
12 extent do you disagree with PFS's analysis of the
13 accident as set forth in Table 1?" And will you
14 read your answer?

15 A. "We don't believe that it is a takeoff
16 accident because, as it says here, takeoff, roll,
17 abort, discontinue and initial climb. The initial
18 climb sequence is complete when the aircraft gears
19 up and you're out of the local traffic pattern,
20 which they are."

21 Q. And I asked you, "What's the basis for
22 that statement?"

23 A. "It is my interpretation of initial
24 climb."

25 Q. I would like to go to a different topic

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 now. I would like to have you turn to page 24 of
2 your first deposition.

3 A. That was December 11?

4 Q. Yes, yes.

5 A. Yes, sir.

6 Q. There on page 204 --

7 A. 204? I thought you said 24.

8 Q. Yes, 204. I asked you if -- "Wouldn't
9 you agree with Ron Fly that the engine flairs are
10 virtually the only reason to expect any F-16
11 crashes in Skull Valley?" And that's where you
12 answered, "Virtually, yeah." And the only other
13 one you could think of would be a bird strike and
14 whether it -- if it hit the engine it would be an
15 engine failure, if it hit the canopy it wouldn't.
16 I take it you believed that was a true and correct
17 statement at the time of your deposition?

18 A. Yes, sir.

19 MR. SOPER: Well, just a minute. He
20 didn't read the whole answer.

21 Q. (By Mr. Gaukler) Okay. "But all of the
22 other type of failures, no. I agree with the
23 exception of bird strike."

24 A. That's my testimony, sir.

25 Q. And you believed that to be true and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 correct at the time?

2 A. Yes, sir.

3 Q. Now, and so what you're saying is that
4 you have engine failures and bird strikes are the
5 two things you can think of as failures at Skull
6 Valley, correct?

7 A. That's not what it says, sir.

8 Q. You don't think that's what it says?

9 A. No. It says engine failures are
10 virtually the only reason.

11 Q. And it goes on to say the only other one
12 you could think of would be bird strikes, correct?

13 A. That's correct. But I didn't rule out
14 anything else.

15 Q. Going on to bird strikes, you claim that
16 with respect to question and answer 85 --

17 A. Which document?

18 Q. In your prefiled testimony.

19 A. Okay.

20 Q. In that one you claim that the PFS
21 misapplied or misevaluated when an accident could
22 occur in Skull Valley, and particularly it was one
23 of the accidents that PFS evaluated concerning a
24 bird strike? Excuse me, maybe I'm misreading this.

25 A. Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Q. Strike that.

2 Now, you claim that bird impacts can
3 occur in Skull Valley because you say, "While
4 flying through Skull Valley I have frequently
5 encountered birds that I estimated to exceed four
6 pounds in weight." Correct?

7 A. Yes, sir.

8 Q. Now, we talked about this in your July
9 deposition?

10 A. Correct.

11 Q. Do you remember talking about bird
12 strikes back then?

13 A. No, sir, I don't.

14 Q. It's been a long day.

15 A. Which page?

16 Q. I believe it's page 123-125.

17 A. Okay.

18 Q. If you look on page 125 -- now, you
19 referred to, in your deposition and you referred to
20 it I think today, seeing birds on your flights
21 through Skull Valley. Isn't it true that you don't
22 know what type of bird you saw on your flights
23 through Skull Valley?

24 A. I have no idea what type of birds they
25 are.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Q. Yeah. And if you look you said -- in my
2 answer to me you said, "I have no idea" -- excuse
3 me. So you had no idea what type of birds they
4 were, correct?

5 A. That's correct.

6 Q. But you estimate them to exceed four
7 pounds in weight, huh?

8 A. Yes, sir.

9 Q. Now, what type of birds? Where did you
10 see these birds that you say are four pounds in
11 weight, you claim?

12 A. Shall I show you on a map? Would that
13 be helpful?

14 Q. Is that by Timpie Springs?

15 A. On the north end here just prior -- just
16 after, just south of the north edge of Sevier B
17 MOA.

18 Q. Now, how can you tell how big they were
19 when you were flying -- let me read what you said
20 back then in July 27, 2001. My question on the top
21 of page 25 is:

22 "Okay. Going back to you're saying
23 you've seen birds in Skull Valley. What type of
24 birds have you seen there?"

25 "I have no idea. And I tell you that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 because I'm doing 400 knots and it flies by. At
2 200 knots you have a hard time determining what
3 kind of bird it is. I wish I could offer more,
4 give you a detailed answer. You can tell they're
5 birds because when the airplane gets near they're
6 just -- they get real streamlined and they try to
7 get out of the way." Correct?

8 A. That's correct.

9 Q. Now, isn't it true that the bird strikes
10 are much more frequent at lower altitudes also than
11 higher altitudes?

12 A. Yes, sir.

13 Q. And most bird strikes occur below 1,000
14 feet; isn't that correct?

15 A. That's a statistic in the Air Force,
16 yes.

17 Q. And in Skull Valley you can't fly --
18 north of Dugway you can't fly below 1,000 feet,
19 correct?

20 A. That's correct.

21 Q. And also I had asked you whether you had
22 any reason -- PFS had done an analysis which showed
23 the closest bird strike based on an Air Force
24 database was 23 statute miles away from the
25 proposed PFS site. Do you remember that?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. I remember the discussion, I don't
2 remember the mileage.

3 Q. Okay. But you had no reason to take
4 issue with PFS's evaluation of that database?

5 A. No, sir, I do not.

6 Q. How can you tell how big a bird it was?

7 A. Well, that's a good question.

8 Q. When you're flying by at 400 knots?

9 A. It's a great question, and let me try to
10 explain it in English. When I was a child going to
11 Little League baseball games, if a foul ball hit
12 the chain link fence I flinched if it was coming
13 right at me. Birds are the same way. If you
14 figure you're going 700 feet per second and you see
15 the bird a couple hundred feet, a hundred feet, it
16 depends on how big it is, so the larger the bird
17 the farther you'll see it away. The first thing
18 that I do is the same thing that happened with the
19 baseball. And the second thing I do is hope that
20 it doesn't hit me because I want to duck, but in
21 the F-16 there is no ducking. You can't move your
22 head to the left, or the right or back or forward.
23 If you move to the forward it's going to hit the
24 glare shield. You're locked into this little
25 canopy and there's nothing you can do to move.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So the question is how big is a bird.
2 And I figure if I can see it for a certain amount
3 of time it's bigger than a sparrow or bigger than
4 something else. And if it looks like a softball to
5 me, it appears to be about four pounds. That's
6 basically how I would estimate it. How accurate is
7 that? I haven't a clue.

8 Q. Now, you referred to a "Handbook of
9 American Birds, State Exhibit 67, which refers to
10 American White Pelicans, Canada Geese, Great Blue
11 Hérons, Bald Eagles and Golden Eagles, which all
12 have weights ranging from 5 to 30 pounds and can
13 fly at altitudes exceeding 1,000 feet. And then
14 you say, "These species have been identified at the
15 Timpie Springs Waterfowl Management area located
16 north of Skull Valley near the shoreline of the
17 Great Salt Lake." Correct?

18 A. That's correct.

19 Q. Now, you rely upon this, I take it, this
20 is Exhibit 68, which if I understand correctly, is
21 just a survey of birds in the Timpie Springs area?

22 A. I believe it's Exhibit 67.

23 Q. Is it 67?

24 A. Yes, that's correct.

25 Q. And you're not a specialist or expert in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 terms of bird patterns or where they feed or
2 migrate?

3 A. I'm only a specialist at hoping they
4 don't hit me, sir.

5 Q. And, therefore, assume that we take the
6 survey correct that there's -- first of all, where
7 is Timpie Springs? That's just --

8 A. It's up near the Interstate 80.

9 Q. Interstate 80. How far from the site?
10 Can you point it out on the map?

11 A. Yeah. I'll tell you in a minute.

12 MR. SILBERG: As the crow flies.

13 COL. HORSTMAN: Two and-a-half knuckles.
14 My initial estimate is about 20 miles.

15 Q. (By Mr. Gaukler) North of Interstate
16 80, correct?

17 A. Yes. About. It could be 25 miles by my
18 knuckles.

19 Q. The village of Skull Valley Band
20 Goshutes is approximately 26 miles from Interstate
21 80?.

22 A. Yes, sir. It was two knuckles.

23 Q. And so you don't know in terms -- well,
24 68, Exhibit 68 is just the water bird survey data
25 in the vicinity of Timpie Springs; is that what you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 understand that to be?

2 A. And your question was 67 or 68?

3 Q. 68 I'm asking about specifically now.

4 A. And the question one more time, please?

5 Q. The survey that you cite for State
6 Exhibit 68, that's just the documentation of birds
7 in the Timpie Springs area north of Interstate 80,
8 correct, as far as you understand it?

9 A. Yes, sir.

10 Q. And you have no experience, like I said,
11 in terms of determining how far birds range from
12 that area, do you?

13 A. Oh, no, sir.

14 Q. And therefore, there's really no basis
15 for your statement that the presence of these
16 species in Skull Valley can be expected as they fly
17 to or from wetlands including Timpie Springs and
18 the Great Salt Lake, the last sentence there, isn't
19 that correct? The last sentence in your answer at
20 85.

21 A. I believe that they do fly from --

22 Q. But you have no basis based upon the
23 study --

24 A. No. No, I don't. That's just --

25 Q. -- of birds, how they range, their

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 habitat or how they migrate?

2 A. No, sir, I don't.

3 Q. And if you hit a bird at Timpie Springs,
4 do you think you would reach the Skull Valley site?

5 A. That's a good question. It depends on a
6 number of things. Primarily my air speed and my
7 altitude. If I hit a bird strike anywhere from --
8 let me show you on the map. The departure corridor
9 departs north of Antelope Island and then comes
10 down as we've seen into the Sevier MOAs. If I hit
11 a bird strike in the Timpie Springs area I would go
12 to my nearest emergency airfield. I would do the
13 same thing if I was anywhere from about halfway
14 across the Great Salt Lake, anywhere through
15 mission to the Utah Test and Training Range. And I
16 would do this because the training you get is to
17 fly the aircraft as they discussed and try to land
18 it. Jumping out is a very bad thing.

19 And so my first action would be to
20 comply with the checklist and to aim towards
21 Michaels Army Air Field. If my engine seized over
22 the middle of the Great Salt Lake it would -- I
23 couldn't make it to Michaels, I couldn't make it to
24 the proposed site. And it would depend on my air
25 speed, but if I was flying at 3,000 feet, 425

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 knots, which is about maybe 4,000 feet there
2 descending in, how far would the airplane go?
3 Well, it depends on how bad the damage is. There
4 are a number of cases of bird strikes where the
5 engine coughs and recovers and you fly normally.

6 JUDGE FARRAR: You're talking now about
7 the engine ingesting a bird.

8 COL. HORSTMAN: Yes, sir.

9 JUDGE FARRAR: As opposed to the bird
10 hitting a canopy?

11 COL. HORSTMAN: Yes, sir. If the bird
12 hits the canopy and doesn't penetrate the canopy
13 you're required to go land somewhere, the mission
14 is over, you abort. In that case, if the canopy
15 seal wasn't broken and the engine was operating
16 normally I would feel perfectly comfortable going
17 back around to Hill Air Force Base and landing. If
18 it hit another surface of the airplane I probably
19 might not know it until I landed, and I would find
20 out on my walk-around inspection after the flight.

21 So assuming that this bird of whatever
22 size hits the engine and causes some damage, it may
23 not cause a lot of damage, but if I had a small
24 bird strike and my engine coughed, if you will, in
25 layman's terms, I would go to Michaels Army Air

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Field and land and it would be no big deal.

2 At the other end of the spectrum is if I
3 hit a bird and very rapidly my engine stopped or
4 disintegrated or whatever it did, I no longer have
5 any thrust. So what do I do? Well, I want to aim
6 somewhere to land. And I also think that I might
7 as a pilot be able to get that engine restarted
8 because we're trained to do that. So my first
9 instinct would be to aim toward Michaels Army Air
10 Field from that location over that waterfowl area.
11 And I know that I'm going to have quite an
12 opportunity to make decisions in this emergency. I
13 would zoom, I would stores jettison whatever
14 external stuff was hanging on the airplane, fuel
15 tanks, bombs, just as the Colonel Fly explained,
16 and I would continue to restart the engine and I
17 would at 250 knots push over the nose of the
18 aircraft and I would begin gliding the airplane at
19 appropriate airspeed, which as he said, is
20 approximately 210 knots. It depends on your gross
21 weight, etc. And I would keep trying to start the
22 airplane.

23 And given the entry parameters that I
24 just gave you, I would fly almost 17 miles before I
25 had to eject. I'm not saying I would hit the PFS

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 site, but I would be aimed directly at that site
2 and I would be working to try to start that engine
3 until I hit 2,000 feet AGL. You've heard testimony
4 that pilots don't eject until way below that. So I
5 guess it would depend on the circumstances and the
6 training. The book says I would have to jump out
7 at 2,000 feet, but obviously we make mistakes. So
8 when I reached 2,000 feet I would pull the nose of
9 the aircraft up so that I would no longer keep
10 descending and I would slow down to as slow as
11 practical before I ejected.

12 When you pull the nose of the aircraft
13 up it goes up almost, and I don't know the exact
14 degrees, but call it 20 degrees. So as Colonel Fly
15 stated, you can see 11 degrees below the horizon if
16 you're flying level. If you're 20 degrees above
17 the horizon you can only see 9 degrees above the
18 horizon. So you can't see anything in front of you
19 on the ground.

20 So your decision process for where the
21 aircraft impacts has to be made during your
22 descent. Assuming good weather and don't assume
23 that, I would have the ability with that seized or
24 blown up or whatever engine to fly for a few
25 minutes, traverse approximately 15 to 17 miles

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 before I ejected. And if the weather was clear, I
2 would look out and find the best place for me to
3 land and the aircraft to land, and I would try to
4 avoid any possible damage to anything but dirt in
5 the desert for both me and the aircraft.

6 JUDGE FARRAR: In that situation, and
7 however unlikely this may be in Skull Valley, given
8 a choice between a safe place for you to land and a
9 safe place for the aircraft to land, what do you
10 pick?

11 COL. HORSTMAN: It depends. And it
12 depends on a number of things. In the case I just
13 described, if I tried three restarts and it wasn't
14 going to go, then I would have the ability at that
15 time to point both the aircraft and myself to an
16 area which would meet those objectives.

17 Q. (By Mr. Gaukler) Would that be an area
18 away from a structure like the PFSF, correct?

19 A. Oh, yes, sir, absolutely. I would try
20 to hit in the middle of nowhere and I would try to
21 land, as he said, on a Serta mattress, but the
22 desert would be okay. Once again, we're assuming
23 that the weather is nice, and with any weather that
24 would change my decision.

25 Q. So you're saying as you come down the 17

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 miles you would be able to see the PFSF site, and
2 assuming the weather was good, and you would avoid
3 that site, correct?

4 A. I wouldn't characterize it quite like
5 that because you wouldn't see it from 17 miles
6 away. And I wouldn't be looking at it until I
7 realized that my engine wasn't going to start and I
8 had to start thinking about ejecting. I would
9 point initially in the direction of Michaels Army
10 Air Field, which is coincidental with PFS. I would
11 do my zoom, push over, the glide down, and I'm
12 going to end up. If I start this maneuver at 425
13 knots, I'm going to climb an additional 6 to 7,000
14 feet. And so I'm going to have the quite a bit of
15 time. So I will be 10,000 feet, 12,000 feet above
16 the ground. And as I'm gliding down I'm going to
17 look at everything out there. I'm going to look at
18 a mountain top, I'm going to try to locate the PFS
19 site, I'm going to try to locate roads, I'm going
20 to try to locate houses and farms and anything
21 else. So that as you heard in previous testimony,
22 if given the opportunity, I would put the aircraft
23 in the position where it damaged the least -- with
24 no damage.

25 Q. Now, you're saying you would have about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 17 miles, you said, something like that?

2 A. From initiation through that entire
3 maneuver the aircraft would impact approximately 17
4 miles away.

5 Q. From the point of initiation of the bird
6 strike you're talking about?

7 A. Assuming the engine stopped right then,
8 yes, sir.

9 Q. And you were saying it's approximately
10 20 plus miles from the site to Timpie Springs,
11 right?

12 A. Yes, sir.

13 MR. GAUKLER: I would renew my motion,
14 objection to Exhibits 67 and 68 based upon his
15 testimony, but obviously I guess there's redirect.

16 MR. SOPER: I'll be silent until you ask
17 for my response, your Honor.

18 Q. (By Mr. Gaukler) And if the bird strike
19 at Timpie Springs caused a -- oh, sorry, your
20 Honor.

21 JUDGE FARRAR: Exhibit 67, Mr. Soper,
22 has some very interesting information about birds I
23 have met and not met, but I am not sure what it
24 adds given the tenor of the conversation. Well,
25 let's do these backwards, I'm sorry. 68, Mr.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Gaukler, give me more argument why 68 shouldn't
2 come in because it appears to be information about
3 particular birds in the particular area mentioned.
4 And then my next question would be if 68 comes --
5 in other words, 67 doesn't look like much by
6 itself, but if 68 comes in then 67 is descriptive
7 of the birds described in 68.

8 MR. GAUKLER: Well, 68, according to
9 what the witness said, to his understanding, is a
10 survey of birds in the Timpie Springs area which is
11 at least 26 miles, or plus 20 he said, but the size
12 is approximately 26 miles from the site -- from at
13 least Interstate 80. And we have just heard
14 testimony that even in the event of the engine
15 failure the jet would take 17 miles to get there.
16 I mean, clearly it would go 17 miles. And he said
17 he was not in a position to talk about the
18 migration of birds to and from Timpie Springs, it's
19 beyond his expertise.

20 JUDGE FARRAR: Tell me about the
21 geography here. Is Timpie Springs Waterfowl
22 Management Area a significantly different kind of
23 area from the area around Skull Valley?

24 MR. GAUKLER: Yes.

25 JUDGE FARRAR: I mean, I take it by its

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 very name that it is.

2 MR. GAUKLER: It's up by the Great Salt
3 Lake, the edge of the Great Salt Lake.

4 JUDGE FARRAR: If I'm one of these bids
5 I would rather live there. What's up there?

6 MR. GAUKLER: It's a salt marsh around
7 the Great Salt Lake, is my understanding.

8 JUDGE FARRAR: If I'm one of these
9 birds, I want to live there rather than down by PFS
10 site.

11 MR. GAUKLER: Yes.

12 MR. SILBERG: Your Honor, if you
13 remember the testimony that's been presented on
14 Utah DD, there was a substantial amount of
15 discussion on what kind of stuff there is at Timpie
16 Springs, and it's clearly a different kind of area
17 than Skull Valley. That's all set forth in the
18 FEIS as well.

19 MR. GAUKLER: We had an extensive
20 discussion of the Timpie Springs Area in our Motion
21 for summary Disposition on Utah DD before you got
22 involved, your Honor.

23 JUDGE FARRAR: I'm only vaguely -- I
24 think that was Judge Bollwerk's decision.

25 MR. SILBERG: Utah DD, the last

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 remaining portion on the peregrine falcons, which
2 you have some areas at Timpie Springs, was settled
3 between us and the State a month or so ago.

4 MR. GAUKLER: It was discussed in the
5 Summary Disposition issues. In any event, Timpie
6 Springs is, and counsel for the State can correct
7 me if I'm incorrect --

8 JUDGE FARRAR: No, no. The denial of
9 summary disposition, I didn't do that, did I?

10 MR. GAUKLER: No, you didn't.

11 JUDGE FARRAR: I was about to extend an
12 apology to Dr. Campe if I had done that and I don't
13 remember four months ago.

14 MR. GAUKLER: Judge Bollwerk was
15 involved in that. After summary disposition there
16 was one small issue left and the parties settled
17 that issue.

18 MR. SOPER: Might I be heard just
19 briefly on this, your Honor?

20 JUDGE FARRAR: Yeah. Against the
21 context of this is a, let's call it a special area
22 somewhat removed from the PFSF and that it's
23 different from the desert.

24 MR. SOPER: It appears from Colonel
25 Horstman's description of how this would affect an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 aircraft, that it matters naught if there is birds
2 around the PFS site, it only matters that there's
3 birds in advance or preceding the PFS site by some
4 distance, 17 miles. And I'm sure we don't take
5 that as 18 is out and 16 is out and it's got to be
6 at 17. But this area is somewhere in the vicinity
7 of 20 miles and I assume it's not fenced in, birds
8 have to get there some way and leave. And whether
9 we're aware of the exact route the birds travel,
10 and there may be none, it certainly would seem to
11 me if these documents, which they do, show a
12 substantial amount of birds in an area in advance
13 of the PFS site, they would be highly relevant, and
14 that the essence of this proceeding is documents,
15 information gathered by e-mail and attachments and
16 things like that have been the predominant source
17 of supplemental information, some very basic
18 information. And I would say that this has all the
19 indications of reliability. In fact, I would
20 suggest probably a higher degree of reliability
21 than many things that have come in. I would think
22 it would be perfectly relevant.

23 JUDGE FARRAR: Hold on a minute. I
24 think, Mr. Soper, that the objection is not to
25 whether it's reliable. I mean, I take it this is a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 reasonably reliable estimate of what birds are
2 living in the waterfowl area.

3 MR. GAUKLER: I don't take issue with
4 that, your Honor.

5 JUDGE FARRAR: It's whether it's
6 relevant.

7 MR. SOPER: Because it's not 17 miles
8 away, it's 20 miles away?

9 MR. GAUKLER: It's more than 20 miles
10 away, counselor, it's closer to -- it's somewhere
11 between 25 and 30, I believe.

12 MR. SOPER: Well --

13 JUDGE KLINE: Mr. Soper, here's my
14 chance to practice ecology, which -- I used to do
15 that for a living.

16 MR. SILBERG: 45 minutes before we
17 returned.

18 JUDGE KLINE: We are planning to award
19 an honorary membership to Mr. Horstman in the
20 Ecological Society of America. But in any event,
21 the issues before the Board are presented in the
22 form of probabilistic risk-type issues. So the
23 issue is not, you know, what species hang around
24 Timpie Springs, the issue is what is the
25 contribution to risk, to the overall risk from bird

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 strikes. And that would require some knowledge,
2 let's say not so much of species, but of
3 frequencies. Frequencies of damage and frequencies
4 of strikes and -- you know, to kind of give us a
5 clue as to what the contribution to risk is.

6 So a list of species really isn't going
7 to be very helpful in that. And so the issue is
8 not whether the species are reliably identified or
9 not, but whether in fact there really isn't better
10 data to estimate risk. And these do not seem
11 probative to the issue of risk.

12 MR. SOPER: I appreciate that, your
13 Honor. That helps me focus a little bit. I think
14 what it does go to, and separate and apart from
15 risk, is the characterization of what sort of
16 accidents ought to be included. It's my
17 understanding there's some dispute as to whether
18 bird strikes ought to be included or excluded, and
19 I think the testimony is offered because we say
20 bird strikes ought to be included.

21 Maybe I'm wrong on that, but I think
22 that that's one reason we offered it. And I think
23 the second reason we offered it has to do with the
24 directions the aircraft might point and where, not
25 to what extent, not probabilitywise, but where such

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 an event might occur. And it seems to me as
2 opposed to flying above the site where there are
3 probably greater -- probably far less birds, it
4 might be more likely that the accident occurred in
5 advance of the PFS site on the flight route
6 requiring the aircraft to be pointed toward
7 Michaels Army Air Field. So it would have to do
8 with the direction the aircraft was pointed and,
9 therefore, the flight path through Skull Valley in
10 connection with the emergency recovery, you know,
11 attempts to land and restart and so forth.

12 JUDGE LAM: Let me be the nice guy here.
13 I agree with both Judge Kline and Mr. Soper, if
14 that's possible. Judge Kline's point is well
15 taken. The existence of the bird does not mean the
16 bird will strike a plane. Therefore, my honorable
17 colleague, his point is absolutely valid.

18 On the other hand, if the Applicant is
19 successful in eliminating the birds from discussion
20 then the risk goes to zero. So this is the point I
21 would urge my colleague to consider. If the birds
22 don't even show up then they're gone.

23 MR. GAUKLER: I would like to ask a
24 question.

25 JUDGE KLINE: There will shortly be a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 40-page dissenting opinion on --

2 JUDGE FARRAR: The witness has testified
3 there are birds out there, and I think I understood
4 your testimony occasionally a bird comes by and --

5 COL. HORSTMAN: And you duck.

6 MR. GAUKLER: Can I ask one more
7 question --

8 JUDGE FARRAR: No.

9 JUDGE FARRAR: Or two?

10 JUDGE FARRAR: Oh, yeah, go ahead.

11 Q. (By Mr. Gaukler) You took issue with
12 one of the accidents that we analyzed with respect
13 to bird strikes, right, Colonel Horstman? Or Lt.
14 Colonel Horstman?

15 A. The other one is fine. General would be
16 great, but --

17 I would have to research it. Off the
18 top of my head, it's been a long day and I don't
19 recall.

20 Q. Let me ask you this. If you had a
21 catastrophic accident, one of the concerns you
22 expressed before was that a bird may come through
23 the canopy?

24 A. Yes, sir.

25 Q. And if you had a catastrophic accident

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 with the bird coming through the canopy, how far
2 would the plane travel then?

3 A. It would depend on the actions of the
4 pilot. In the case of Cold Lake, he jumped out
5 immediately. In the case of another friend of
6 mine, the bird came through the wind screen.
7 Instantly he's got zero visibility because it's
8 total fog because of the temperature change, and
9 then very briefly thereafter he has clear
10 visibility, perfect vision. And depending on
11 summer or winter you're either hot or cold because
12 there's no air conditioning working. It's just
13 very, very windy.

14 In the case of a close friend of mine
15 who took a bird strike over a coast, he was at
16 1,000 feet, he zoomed his aircraft and was able to
17 land it at an emergency airfield. So I guess, and
18 unfortunately as most answers to questions
19 requiring pilotage, it depends. And I have never
20 had a bird strike activity like that so I give you
21 those two examples and they're both very extreme.
22 Whether somewhere in the middle is valid, I don't
23 even hazard a guess, sir.

24 Q. The one you referred to in Cold Lake,
25 that was an F16 event, correct?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. Yes, sir.

2 Q. Was the other one an F-16?

3 A. The other one was an F-111.

4 JUDGE KLINE: Colonel Horstman, while
5 you were stationed at Hill, how many bird strikes
6 per year occurred that actually resulted in loss of
7 an aircraft?

8 COL. HORSTMAN: I don't think any, sir.
9 And if I can follow-up on that, the Air Force's
10 current tactics for employing air power, the kind
11 of airplanes they fly at Hill they fly at a medium
12 altitude operation. Typically, let's just say for
13 argument's sake, 20,000 feet. In the early '90s
14 and throughout the 1980s they used a different
15 tactic, they used a low-level tactic to avoid the
16 enemy radars and missiles and threats, etc.

17 At that time, and it was in a different
18 aircraft, I flew through Skull Valley at 500 feet
19 because it wasn't prohibited. The Sevier B MOA was
20 100 feet up, and we flew high speed through Skull
21 Valley. Clearly, as has been discussed, there's
22 more birds closer to the ground. The higher up you
23 get there's less. If the Air Force next year were
24 to change their tactics and go back to high speed
25 the low-level land turn, the low level night and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the level day training, autopilot rides the earth,
2 then the risk would change dramatically.

3 Today, because of the profiles they fly,
4 the risk is less than it was with the previous
5 tactic that was used by the Air Force. So I would
6 ask myself what's the tactic that they're going to
7 use in 2010, and I don't know.

8 JUDGE LAM: But I would assume Judge
9 Kline's perception is correct, this is a low risk
10 event. By low risk I meant you have not seen much
11 data. Now, I don't know what my personal
12 observation can add to that. I had close to a
13 million miles of civilian air travel as a
14 passenger. Only one flight that I was on
15 experienced a bird strike. A 747 on takeoff, a
16 bird hit the engine. So I remember that because I
17 was delayed for 12 hours. And I wasn't happy about
18 it.

19 COL. HORSTMAN: I'm going to guess here
20 because I don't know an exact number, sir.
21 Southwest Airlines where I'm a pilot, we fly
22 approximately 3,000 flights a day, slightly less.
23 We have 100 bird strikes a week. I personally have
24 had dozens of bird strikes in the last year, some
25 multiple. Most of them I never knew I hit until

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the post flight. I hit a number of birds on final
2 approach into an airport, didn't know it. The next
3 leg of the same flight segment we had to take
4 evasive maneuvers because of birds on the final
5 approach. That wasn't here in Utah, but bird
6 strikes that passengers know about are very, very
7 rare.

8 JUDGE LAM: But the only one that
9 matters in that data is the one that the engine was
10 damaged; isn't that true?

11 COL. HORSTMAN: No, sir. Oh, no, sir,
12 not at all.

13 JUDGE KLINE: We're not talking about
14 risk to the aircraft, we're talking about risk to
15 the PFS facility. The question is, what do bird
16 strikes contribute, what do bird strikes on
17 aircraft contribute to the risk as a component of
18 risk to the PFS facility. And if we're -- you
19 know, we're hearing your testimony all along that
20 there are birds there and so we're not going to
21 neglect the fact that there are birds there. The
22 issue before us is whether these two Exhibits have
23 any bearing on it, on the issue of risk to the PFS
24 facility, not on, you know -- perhaps we don't need
25 to establish now that there are birds in Skull

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Valley, or to do it any further. But the issue,
2 the question of whether these two Exhibits
3 contribute anything to the estimate of the
4 contribution to risk to the facility is something
5 that I haven't really seen a good argument on.

6 MR. SOPER: I think that we haven't
7 offered them for that. Your Honor, had it not been
8 the case where PFS has attempted to exclude from
9 the consideration a crash, a crash that was caused
10 by a bird strike, we wouldn't have brought up the
11 subject. We're saying yes, a bird strike can
12 happen. You shouldn't consider it from the data.
13 So we're not offering it to increase the data,
14 we're saying it ought not to be decreased because
15 it's an impossible event. That's the only reason
16 we offer it.

17 JUDGE FARRAR: Okay. Bird strike crash
18 accidents are included in the accident crash rate
19 data regardless of what we say here. So the issue
20 is what you just said, Mr. Soper, this goes only to
21 whether -- the legitimacy of excluding a particular
22 accident.

23 MR. GAUKLER: Yes. Might I focus the
24 witness on that accident?

25 Q. (By Mr. Gaukler) If you turn to Tab H

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of the aircraft crash report.

2 A. I need help.

3 Q. I would offer you mine, but then I would
4 be without one.

5 A. I'm sorry, I had it.

6 (The Board conferred off the record.)

7 JUDGE FARRAR: Go ahead, Mr. Gaukler.

8 Q. (By Mr. Gaukler) If you look on page 24
9 of Tab H --

10 JUDGE FARRAR: Mr. Gaukler, let's -- I
11 think the better view on this is that this one of
12 these cases where in an administrative proceeding
13 if something is at least potentially marginally
14 relevant you let it in. In other words, I wouldn't
15 want to get to the end of the decision and have
16 this turn on this. So I think our decision would
17 be to deny your objection, let it in, in case it
18 might prove relevant. I mean, there's a
19 possibility of relevance, there's a possibility it
20 will have nothing to do with the case.

21 In an administrative proceeding the rule
22 is if you're not sure it's out or it's in. I think
23 on that basis we would let it in, but to save Judge
24 Kline writing a lengthy dissent, he is not sure he
25 sees, you know, that potential relevance. So let's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 have it in and then we can argue about it at the
2 end of the case. It's not worth spending any more
3 time on.

4 Before we leave birds, I think there was
5 something in your testimony about a four pound bird
6 will crack your wind screen and can mess up your
7 canopy so you can't eject? I those there was
8 somewhere in here that somebody had his canopy --

9 COL. HORSTMAN: Sir, the Air Force has
10 done a number of studies on bird strikes. They
11 take a dead frozen chicken and shoot it at a canopy
12 on every airplane. They test it very carefully so
13 that they know what speed the penetration will be.
14 Now, I'm going to have to look that up. I don't
15 know what the exact reference was.

16 JUDGE FARRAR: There was something in
17 there like four pounds at 450 knots. Does your
18 current employer do a better job for us who
19 occasionally get on that airline?

20 COL. HORSTMAN: Actually, we do. Our
21 wind screens are certified at 10,000 feet to 250
22 nautical hours per hour against --

23 MR. GAUKLER: Dead chickens.

24 COL. HORSTMAN: -- against all the dead
25 chickens. As far as the wind screen and the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 canopy. If it hit an engine -- I mean, in a 737
2 I'm sucked up big birds and the engine works fine
3 and you go out there at the end and you go, it's
4 all beat up and it works fine. So it's a
5 completely different concept. It's an E=MC2. The
6 faster you go, the more damage.

7 MR. GAUKLER: I don't think that's an
8 acceptable formula.

9 JUDGE KLINE: That's Newton.

10 MR. GAUKLER: Yes, that's Newton.

11 MR. SOPER: Unless you're going really
12 fast.

13 COL. HORSTMAN: Pardon my reference.

14 JUDGE FARRAR: Mr. Gaukler, what was
15 your next line of inquiry going to be?

16 Q. (By Mr. Gaukler) I want to follow-up on
17 this with respect to the particular accident we're
18 dealing with. Looking at the Table 1, which is PFS
19 Exhibit X, you take issue with our classification
20 of the May 13, 1998 accident, correct?

21 A. Yes, sir, I do.

22 Q. And that accident involved a bird
23 strike, correct?

24 A. That's correct.

25 Q. Now, I think it's correct to say that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that's the only accident categorization that you
2 have taken issue with in terms of us excluding
3 something that you think should be in because of a
4 bird strike?

5 A. I believe so, yes.

6 Q. So this is area of the accident that
7 focuses on if we might be affected by birds,
8 correct?

9 A. Yes, sir.

10 Q. Now, would you go to page 24 of Tab H.

11 A. I'm there.

12 Q. And we have a summary -- this is Tab H
13 to the Aircraft Accident Report. We have a summary
14 there on the bottom of page 24 of this accident,
15 correct?

16 A. Yes, sir.

17 Q. And you generally don't disagree with
18 our summary of this accident as set forth there, if
19 I recall correctly?

20 A. That's correct.

21 Q. And so, therefore, we agree that this
22 accident occurred at approximately 830 feet AGL?

23 A. Yes, sir.

24 Q. And that the airplane was going about
25 520 knots during a low-level flight?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. Yes, sir.

2 Q. And we've already talked how in Skull
3 Valley you wouldn't fly below 1,000 feet AGL?

4 A. That's correct.

5 Q. And you also just referenced a few
6 minutes ago that, you know, bird strikes are much
7 more likely at lower levels, correct?

8 A. Yes, sir.

9 Q. And the ability of the plane to travel
10 would be less at lower levels than higher levels,
11 correct, to travel that distance? Hitting a bird
12 at a lower altitude as opposed to a higher altitude
13 you would travel a shorter distance?

14 A. Very slightly. If you're -- you
15 calculate it all based on the last descent rate and
16 you're going to go 7,000 feet in five miles. So it
17 would shorten it slightly, a couple of miles,
18 perhaps.

19 Q. Now, in this case the pilot lost
20 control, right?

21 A. Okay. Let me read it again. Connie,
22 can I see the accident report, please, 13 May '98?
23 I am missing page 3 of this document.

24 MR. GAUKLER: Can we just take a quick
25 break?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 COL. HORSTMAN: I'm sorry, it's out of
2 order. And I'll be quick, I'm almost done. I'm
3 sorry.

4 JUDGE FARRAR: Mr. Gaukler, do you want
5 to break for another purpose?

6 MR. GAUKLER: We want to check something
7 in the testimony.

8 JUDGE FARRAR: Just stay in place until
9 everybody is ready.

10 Q. (By Mr. Gaukler) Okay, go ahead.

11 A. The question again?

12 Q. This was an accident in which the pilot
13 -- resulted in the pilot being out of control of
14 the plane, correct?

15 A. The accident report doesn't say that.
16 You can make that assumption because the airplane
17 obviously got beat up pretty badly. But it doesn't
18 say that the aircraft was out of control, it just
19 says that the pilot ejected.

20 Q. And what happened, was it that five
21 pelicans went through the --

22 A. Oh, it was a bad day, yeah.

23 Q. Five large pelicans, he hit five large
24 pelicans, he was flying in a low land place,
25 correct? Along the Missouri River bottom, wasn't

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it, if I recall correctly?

2 A. He was flying the Missouri River at low
3 land. I'm not sure --

4 Q. It was next to the Missouri River,
5 correct?

6 A. Yes.

7 Q. And at a level that he wouldn't fly at
8 through Skull Valley, correct?

9 A. Well, that's an interesting point
10 because he's 170 feet AGL. We're talking thousands
11 of feet, so would he be there or not?

12 Q. I didn't understand what you just said.

13 A. Okay. The lowest you're supposed to go
14 at Skull Valley is 1,000 feet. And this is 830
15 feet and 520 knots. As I previously testified, I
16 have exceeded 500 knots through Skull Valley and I
17 have flown it at a thousand and feet. And if truth
18 be told, I have gone below 1,000 feet inadvertently
19 and I immediately made a correction. My wingmen
20 have done the same thing.

21 You have a radar altimeter that you set
22 on the lowest minimum altitude that you're supposed
23 to descend to. Let's assume for this case that's
24 1,000 feet. When you review videotapes at the end
25 of flights and you go back and look at the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 performance of the individual, many times we see
2 individuals inadvertently descending below 1,000
3 feet, or if it was 1,500 feet, whatever the greater
4 altimeter setting was. So it is 170 feet below
5 what is considered Skull Valley as far as what the
6 Air Force prefers for you to fly. Does that mean
7 I've broken a rule? Yes, if you make an immediate
8 correction. That's why it's -- I mean, that's what
9 you're supposed to do.

10 Q. Now, assume you hit five pelicans at
11 Timpie Springs 25 to 30 miles away at, let's say
12 830 feet, would you ever reach the Skull Valley
13 site from there starting off at 830 feet AGL?

14 A. Give me one minute and I'll tell you.

15 Q. Could you hold onto you answer -- oh,
16 Colonel Fly is back. Could you reread my last
17 question?

18 (Pending question read.)

19 COL. HORSTMAN: And just so you know,
20 and I'll catch Colonel Fly up, I'm running through
21 the -1 technical information to determine what that
22 information is. I don't know what it is. Sir, the
23 answer is you would not reach it.

24 Q. (By Mr. Gaukler) You would not reach
25 it?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 A. No, you would be well short. I just
2 wanted to make sure. I assumed that, but --

3 Q. So you would be well short of the site,
4 right?

5 A. Yes, sir.

6 MR. GAUKLER: Can we take a break?
7 We're at a point where we would be going on to a
8 different topic. This might be a good point to
9 stop for the evening.

10 JUDGE FARRAR: Whoever suggested six
11 o'clock was a genius because --

12 MR. SILBERG: That was me, that was me.

13 JUDGE FARRAR: But also, Mr. Silberg,
14 you mentioned as the crow flies and then were so
15 ashamed of your own pond that you looked sheepish.
16 Were you going to in our next session talk about
17 lightning?

18 MR. GAUKLER: Yes. Well, we talked some
19 about lightning with that one accident. But yes,
20 we'll talk about lightning.

21 JUDGE FARRAR: Because I had one
22 question. So in case I don't --

23 MR. GAUKLER: Well, why don't you ask
24 the question now.

25 JUDGE FARRAR: This is, again, a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 layman's question. I always thought that the
2 reason pilots avoided thunderstorms was the
3 turbulence, particularly at lower altitudes, and I
4 thought I knew that no commercial plane had ever
5 been destroyed by lightning. How come lightning is
6 a problem, thunderstorms? I mean, I understand why
7 you avoid a thundercloud, but I didn't know that
8 lightning was a problem for you all.

9 COL. HORSTMAN: Lightning can go up, and
10 I don't know the exact number, but approximately 10
11 miles away from a thunderstorm. Flying into a
12 thunderstorm is a dangerous activity in any
13 airplane.

14 JUDGE FARRAR: Right. And that's
15 because of the turbulence?

16 COL. HORSTMAN: That's correct.
17 Lightning discharges are potentially very
18 dangerous. There are a lot of them. All the
19 airplanes have static dischargers so they will
20 minimize that. The Air Force issues probability of
21 lightning conditions, POLC, as far as when
22 thunderstorms come into the area. So they monitor
23 that pretty carefully. But lightning is a very
24 real threat. I've been struck by lightning a
25 couple of times.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 JUDGE FARRAR: As military or as a
2 Southwest pilot?

3 COL. HORSTMAN: Yes to both.

4 JUDGE FARRAR: What happened with the
5 Southwest plane?

6 COL. HORSTMAN: Nothing much happened to
7 my F-111 or the 737. A B-52 I was flying in, it
8 blew a two foot section off of the tail.

9 JUDGE FARRAR: Okay. That's the limit
10 of my inquiry. Let me ask one other question. We
11 talked at great length yesterday about cloud cover
12 and ceilings, whatever the definition is. And then
13 you talked today about what your average day was
14 like at Hill.

15 MR. GAUKLER: I plan on covering cloud
16 cover when we resume, your Honor.

17 JUDGE FARRAR: Oh. Then I will remember
18 to ask this question. Or maybe this would help
19 you. Let me ask the question, again it's a very
20 simple one, and then you can follow-up. When you
21 all are sitting over at the base and you have your
22 plan for the day and someone looks out the window
23 or your meteor --

24 COL. HORSTMAN: The met guy.

25 JUDGE FARRAR: Weatherman calls up and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 says, "Hey, there's 80 percent cloud cover, it's
2 hard to see anything out there." Do you then say,
3 "Gee, this is a great opportunity to practice," or
4 do you say, "Well, let's stay home today"?

5 COL. HORSTMAN: That's a good question,
6 and once again it depends. And the way that works
7 is the pilots do it themselves because Michaels
8 Army Air Field and Hill Air Force Base and Wendover
9 report and just kind of look at all of those and
10 find out if the weather is consistent or
11 inconsistent. So they have generally enough
12 information on where the cloud ceiling is. The
13 first airplane in the morning tells you where the
14 cloud tops are because the weather guys don't
15 measure that. So if there was a solid ceiling, 100
16 percent of the sky was covered at 10,000 feet MSL,
17 so 4,500 feet above us, and that deck went two or
18 3,000 feet up and you were flying air-to-air
19 combat, it would have minimal to zero impact on
20 your mission. If you were flying --

21 JUDGE FARRAR: Why, because you're above
22 it?

23 COL. HORSTMAN: You're way above it.
24 And there's prescribed distances to remain above
25 and to the side and below. If you're doing what

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you would call dogfighting, basic fighter
2 maneuvers, you end up going lower in those because
3 you lose your energy. So it would impact that
4 slightly. You would start higher, but you still
5 fly. If you were doing a medium altitude bombing
6 run you couldn't see the ground. So your
7 opportunity would be to go -- you would attempt to
8 do that hoping you could see a hole in the clouds,
9 or just work through the pacing.

10 And I guess the final type of activity
11 would be you would just fly below it all the time.
12 If you were doing a low level or a surface attack
13 mission where you fly low level and you're doing
14 dive bombs, you would shallow out the dive bomb.
15 So each flight lead would modify his daily flight
16 desires. If there were more clouds then his
17 supervisors would be involved. If there were
18 clouds from the ground to the moon, a lot of the
19 training would not happen. A number of things
20 would happen, for example, instrument procedure
21 flying. So it depends.

22 JUDGE FARRAR: Mr. Gaukler, that was
23 just intended to be background information. So
24 when we come back, which will be in May?

25 MR. GAUKLER: Yes. Colonel Fly, he's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the last witness in terms of us, he can fly in
2 Monday, May 13.

3 JUDGE FARRAR: We can decide all this.
4 You know, we'll be together for three weeks on
5 other issues. You had some Exhibits that we hadn't
6 moved.

7 MR. GAUKLER: That's true, we have.

8 JUDGE FARRAR: We could try to do that
9 now. There's a part of me that would like to do it
10 now, but last night when we were all tired we
11 started making mistakes and so I don't know if it's
12 worth doing. So put that down on your little
13 checklist. Is there anything else any counsel
14 needs to bring up before we adjourn? Off the
15 record.

16 (Discussion held off the record.)

17 JUDGE FARRAR: Back on the record. It's
18 been a good session. We've had our very good
19 moments, a couple of bad ones, but all in all,
20 again, as I commended counsel at the beginning of
21 the week for the stellar written work, I think
22 we've had very good lawyering on our seats and our
23 feet here this week. I'm sorry we couldn't finish.
24 We will finish this issue in May. I would think we
25 can finish the environmental issues in the time

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 allotted and two weeks from now, and then we will
2 do the seismic issues. So thank you all and we'll
3 see you in a little more than a week.

4 (The proceedings were concluded for the
5 day at 6:00 p.m.)

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory Commission
in the matter of:

Name of Proceeding: Private Fuel Storage, LLC

Docket Number: Docket No. 72-22-ISFSI

ASLBP No. 97-732-02-ISFSI

Location: Salt Lake City, Utah

were held as herein appears, and that this is the
original transcript thereof for the file of the United
States Nuclear Regulatory Commission taken by me and,
thereafter reduced to typewriting by me or under the
direction of the court reporting company, and that the
transcript is a true and accurate record of the
foregoing proceedings.

13/ Diana Kent
Diana Kent
Official Reporter
Neal R. Gross & Co., Inc.

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com