NATIONAL TRANSPORTATION SAFETY BOARD

AIRCRAFT ACCIDENT OF ALASKA AIRLINES FLIGHT 261 BOEING MD-83, N963AS PACIFIC OCEAN NEAR PORT HUENEME, CALIFORNIA JANUARY 31, 2000 ACCIDENT: DCA-00-MA-023 PUBLIC HEARING

Board Room and Conference Center National Transportation Safety Board 429 L'Enfant Plaza, SW Washington, D.C. 20594

> Saturday, December 16, 2000 11:00 a.m.

Board of Inquiry

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PROCEEDINGS 1 2 11:00 a.m. MR. HAMMERSCHMIDT: If we could all please 3 4 take our places, we will begin the hearing. 5 Let me first say good morning and welcome to 6 everyone, to this fourth day of the National Transportation Safety Board's Public Hearing Concerning 7 the Accident that Occurred on January 31 of this year, 8 9 Involving Alaska Airlines Flight 261, an MD-83. 10 Let me extend a warm and special welcome to 11 those who are viewing this hearing, this fourth day of the hearing, on the West Coast, in Bellevue, 12 Washington, and in San Francisco, California. 13 Those 14 would be the family members who lost family and loved ones aboard that flight, and, of course, we have family 15 16 members here in the room again today, and we certainly extend to them a special welcome and again reiterate 17 our efforts to keep them as informed as we can about 18 the accident investigation. 19 20 Mr. Rodriguez, are there any -- as hearing 21 officer, are there any loose ends from yesterday that 2.2 we need to address at this point before proceeding to our next witness? 23

1 MR. RODRIGUEZ: Not at this time, sir.

2 MR. HAMMERSCHMIDT: Let me ask you. You may 3 not have prepared for this, but we did have the request 4 to admit or accept as an exhibit an Advisory Circular a 5 couple of days ago. I believe Mr. Guzzetti made that 6 request.

Did we actually determine if we need that entire Advisory Circular -- as it turned out, it was rather thick in nature, and -- or are we merely -- for the record, are we merely going to make excerpts an exhibit?

MR. RODRIGUEZ: Mr. Guzzetti springloaded out of his chair. Yes, sir. It was identified as 9-Zulu, and it is titled "Excerpts of FAA Advisory Circular 121-1A".

16 I had asked Jeff to get it yesterday, and it 17 has not been reproduced.

18 MR. HAMMERSCHMIDT: Okay. Thank you. Just 19 wanted to get a clarification for the record on that, 20 in case anyone might be expecting the entire advisory 21 circular. It was a large document, and it's not 22 necessary for our purposes, at least, to have that as 23 part of the exhibit record.

24 I might mention to those who may not be here

with -- in person at this hearing, with access to the exhibits or to those who are not on the West Coast who have access to the exhibits, I'm addressing more probably those who are watching this public hearing on the live webcast on the Internet, that the exhibits to this public hearing are voluminous.

7 In fact, they comprise approximately three of 8 these binders. Just to put that in perspective. They 9 contain obviously a great amount of factual 10 information, and I want to emphasize "factual 11 information", and that's what this proceeding is. It's 12 a fact-gathering exercise. It's an exercise.

13 It's a work session essentially of the 14 National Transportation Safety Board by which we can 15 continue to accumulate factual information and also 16 fill in holes and make clarifications to factual 17 information that we already have in our possession.

And if anyone who has been observing this hearing the past three days has any further questions that they think they need answers to or they think might not have been asked by our people, I would advise them or make a strong suggestion that they try to obtain the exhibits in those areas because the exhibits that I have reviewed are quite excellent.

1 And I especially would point people towards the Group Chairman's Factual Reports, and the last day, 2 we were concentrating on the area of maintenance 3 records, and for example, Mr. Frank McGill's 4 5 Maintenance Records Group, Chairman's Factual Report, a 6 document 70 pages in size, is, to my view, quite 7 excellent and very impressive with the information that is contained in it. 8

9 So, lest anyone think that the information 10 we're obtaining in this public hearing is limited 11 strictly to the questions being asked, they need to 12 understand that we do have quite an accumulation of factual information that is readily accessible through 13 our Office of Public Inquiries, and I'd just suggest 14 15 you avail yourselves of that opportunity, if you so wish. 16

17 And in that regard, I ought to say at this 18 point that someone here that works at the Safety Board has been very instrumental with the exhibits and also 19 the organization of this hearing, and we -- there's no 20 way we could have conducted this public hearing without 21 2.2 her assistance, and that's Mrs. Carolyn Dargan, and I 23 wish to acknowledge her very able assistance and contribution once again. 24

1 Today, we have planned five witnesses. We are now in our fourth day of this public hearing. 2 We originally planned to have only a three-day public 3 4 hearing, but because through a certain amount of 5 tenacity and effort, we were able to add a few more 6 witnesses to our original witness list. 7 We extended this to a four-day hearing, and 8 the final witnesses will be employees of the Federal Aviation Administration. 9 10 So, without further ado, Mr. Rodriguez, I will call the next witness, and we will get underway 11 12 with our questioning. CAPTAIN FINAN: Mr. Chairman? 13 14 MR. HAMMERSCHMIDT: Oh, excuse me. Captain 15 Finan with Alaska Airlines. CAPTAIN FINAN: Yes, sir. You asked about 16 17 loose ends from yesterday. MR. HAMMERSCHMIDT: Yes, sir. 18 CAPTAIN FINAN: And the question was raised 19 yesterday about whether the NTSB was aware of Alaska 20 Airlines' internal fuel -- I'm sorry -- internal tool 21 2.2 audit, and who might have precipitated that audit, and that issue's addressed in the Interview with Mr. 23 Fowler. The transcript pages are 1204 through 1207 of 24

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1 that interview, and I won't go into that, but the first question asked was by Mr. Rodriguez, and the question 2 3 was, "Can you tell me who is heading up your 4 investigation internally on the tools?", and that 5 conversation or that dialogue goes from Transcript 6 Pages 1204 to 1207. 7 MR. HAMMERSCHMIDT: Thank you very much for that reference. We have so noted that. 8 9 Anything further, Mr. Rodriguez, from a 10 hearing officer perspective? MR. RODRIGUEZ: No, sir. It simply indicates 11 12 that I am sharp, but I have a lousy memory. MR. HAMMERSCHMIDT: Well, we have accumulated 13 14 also, in addition to the exhibits to this public 15 hearing, a more voluminous amount of pages of transcripts from interviews that have been conducted 16 17 around the country actually, and we appreciate your pointing out those particular references. 18 19 Would Mr. Larry Youngblut please come to the witness table? 20 21 Whereupon, 2.2 LARRY YOUNGBLUT 23 having been first duly affirmed, was called as a witness herein and was examined and testified as 24

1 follows:

2 MR. RODRIGUEZ: Please be seated, sir. Interview of Larry Youngblut 3 4 MR. RODRIGUEZ: And would you give us your 5 full name? 6 MR. YOUNGBLUT: My full name is Lawrence John 7 Youngblut. I go by Larry. MR. RODRIGUEZ: And what is your occupation? 8 9 MR. YOUNGBLUT: My occupation is I'm an 10 Aviation Safety Inspector, and I'm the Manager of the Air Transportation Oversight Program Office. 11 12 MR. RODRIGUEZ: And your business address? MR. YOUNGBLUT: My business address is the 13 Certification and Surveillance Division, AFS-900, and 14 15 we're located at Dulles Airport. MR. RODRIGUEZ: And would you briefly 16 17 describe your aviation background for us? MR. YOUNGBLUT: My aviation background began 18 back in 1973 with ROTC and private pilot certificate 19 in a Cessna 150 and continued on through right now, I'm 20 in my 27th year of Active Duty and Reserves, flying KC-21 2.2 135, on Active Duty, and 13 years of flying C-5 in the 23 Reserves, and I'm continuing on over at the Pentagon right now. 24

1 And my FAA experience, I began working with the FAA in 1986 as an air carrier inspector assigned to 2 the Dulles Flight Standards District Office, worked 3 there three years and then went downtown and actually 4 5 worked in an Air Facilities Group down there for about 6 two years, before going back to Flight Standards in the 7 Air Transportation Division at Headquarters, and I've been -- from there, I went and worked at the ATOS Work 8 9 Group, and for the last 20 months, I've been the 10 Manager of the Air Transportation Oversight System 11 Program Office.

MR. RODRIGUEZ: In general terms, have you been affiliated with the ATOS Program since its inception?

MR. YOUNGBLUT: Yes, sir. I was an original member of the ATOS Work Group, and I guess I will have to clarify that just a little bit. I was a member of that work group, finished that work group, and then actually got hired by CSET as a team leader, spent six months working at CSET.

I'm sorry. I need to -- Certification
Standardization Team, Evaluation Team, and helped them
develop their System Safety Base Certification Approach
and then actually got selected as the Manager of the

1 ATOS Program Office.

2 MR. RODRIGUEZ: Thank you very much, sir. Dr. Brenner will question the witness, Mr. Chairman. 3 4 MR. HAMMERSCHMIDT: Please proceed, Dr. 5 Brenner. 6 DR. BRENNER: Thank you, Mr. Chairman. Good 7 morning, Mr. Youngblut. 8 MR. YOUNGBLUT: Good morning. 9 DR. BRENNER: We'd like to ask you about the 10 Air Transportation Oversight System, ATOS. Briefly, what is ATOS? 11 12 MR. YOUNGBLUT: It's the FAA's Re-Engineered Certification and Surveillance Oversight Process. 13 ATOS is a dynamic process. It's a systematic process, and 14 15 it's proactive. 16 The essence of ATOS is it uses system safety 17 principles and risk management principles to proactively try to identify risks within air carrier 18 systems and deal with those risks before they would 19 become an incident or an accident. 20 DR. BRENNER: And briefly, what is the 21 history of ATOS? 2.2 23 MR. YOUNGBLUT: ATOS -- really, the concept came out of -- after the ValuJet crash back in 1996. 24

The FAA and Flight Standards after that crash looked
 inward at our surveillance and our certification
 process and determined that we could do a better job in
 our oversight.

5 I think we recognized at that point where our traditional surveillance had reached its limit as far 6 7 as being able to inspect in safety into air carrier 8 processes, and we had a 90-day study, and out of that 9 90-day study, it was the Recommendation 2-A actually 10 that directed the FAA to develop an oversight process 11 that identifies risks and then targets our inspector resources at those air carrier risks. So, that's kind 12 of the background. 13

DR. BRENNER: What was the previous system 14 15 that it replaced, the traditional system you said? 16 MR. YOUNGBLUT: It was our Performance 17 Tracking and Recording System or PTRS, and that system is more of an event-based system; that is, we would go 18 out and surveil an air carrier operation to see if that 19 particular operation was done in accordance with their 20 procedures and in compliance with the regulations, and 21 2.2 then go ahead and capture that information and go on. 23 I could probably give you an example to compare the two, if --24

1

DR. BRENNER: Please.

MR. YOUNGBLUT: -- that would help. 2 I quess, first of all, under our traditional surveillance --3 4 let's take, for example, carry-on baggage. I think 5 we're all familiar with that. In our traditional surveillance at the end of 6 7 the jetway, at the door of the airplane, if I was an inspector there, I might notice an over-sized bag, and 8 I would watch to see what the flight attendant would do 9 10 at that point, whether that bag would get on the 11 airplane or whether that bag would be checked. 12 Of course, if it got on the airplane, I'd have to start an enforcement action. If it didn't, the 13 flight attendant would direct the bag to be stowed. 14 15 That's kind of our traditional surveillance. Now, under ATOS and System Safety, when that 16 17 bag showed up at the end of the jetway, under our ATOS and System Safety Approach, we want to know why that 18 bag showed up there. It shouldn't have showed up 19 there. So, we're going to take a systems approach to 20 21 look at that problem, and when we take that systems 2.2 approach under ATOS, we're looking at not only 23 compliance, but we're looking at certain safety attributes built into that carrier's approved carry-on 24

1 baggage program.

2	So, when this happened, the first thing I
3	would do in system safety is say, what were the
4	controls involved, and how did that bag ever show up
5	there, and a real good control in a carry-on baggage
6	program is that that little gate that's in front of the
7	x-ray machine, some of them have a little size cut-out
8	where only a certain size bag can go through there, and
9	that's a great control because if that control is
10	effective, that large bag would have never showed up.
11	Another thing we're looking for is in systems
12	safety, the bag showed up, does the carrier have a
13	process measure in place that somehow captures the
14	number of bags that really show up there, so that the
15	air carrier knows that they have a problem with that
16	carry-on baggage program before the FAA ever shows up.
17	Another thing we would look for here are the
18	interfaces with that carry-on baggage program. What
19	does it say in the flight attendant's manual? What
20	does it say in the gate agent's manual? To make sure
21	that those are consistent, and a couple other things we
22	would look at.
23	We'd want to know who really has the
24	authority or the authority to change those carry-on

baggage procedures. Who is responsible for that program, and just exactly what are those procedures, and are they clearly written and understood by everybody?

5 So, the big difference in our traditional 6 surveillance is we go out there, and we look, we 7 observe, and we report. Under ATOS and Systems Safety, 8 we go a lot further. We like to get to the root cause 9 and like to take a whole systems perspective toward 10 surveillance.

DR. BRENNER: Now, I had a good question from one of my colleagues. We can understand that if you have an inspector there, and he sees the bag get on, and under the traditional system, he can act, but under ATOS, if there's no one there, if the bag somehow gets on the plane and isn't observed, how does ATOS find out about it?

MR. YOUNGBLUT: Well, if the carrier has -well, first of all, I hope the bag wouldn't be carried on, but if the bag showed up at the door, I would hope that the carrier has a process somehow that the flight attendants are keeping track of how many bags actually show up there. How many bags do I have to get checked, you know, on a daily basis or a weekly basis or

something because that's an indicator that that program
 is not effective.

In a system safety approach, it's that air carrier who's responsible for compliance and operating at the highest level of safety. So, we're not there every time to see that no over-sized bags get there, but the carrier should have that program in place with the right safety attributes, as I mentioned, to make sure that doesn't happen.

DR. BRENNER: And, so, if I understand, ATOS would look at the company and at its procedures and look at possibilities where it would look for something like this to come through or have it reported back, is that fair?

15 MR. YOUNGBLUT: Yes, sir.

DR. BRENNER: Do other regulatory authoritiesuse surveillance systems like ATOS?

MR. YOUNGBLUT: New Zealand, they have actually mandated a system safety approach for all of their operators. The Australians use system safety in their oversight approach, have not mandated it yet, although that's in the pipeline.

Interestingly, a little bit of study, we'redoing a larger project that will encompass system

safety in all of Flight Standards, and it's a Systems
 Approach for Safety Oversight or SASO.

Well, in doing a little bit of research in the economic analysis for that project, it ran into the United States or there's a MIL Spec, 882Delta, which talks about system safety and its application of system safety not only in acquisition process but in the operation of that equipment after it's acquired. So, that was an instance.

Another statistic that I ran into was the Navy. The Navy, in their development of the F-18 and the F-14, they use a system safety approach not only in the acquisition but only the way that airplane would be operated, and they compared that to the A-7 and the A-4.

Those were not done under a system safety approach, and the results of that were an 80-percent reduction in accidents to the F-18 versus the A-7, and a 60-percent reduction in the F-14 to the F-4, and they calculated that that was a savings of over \$5 billion over a 10-year period.

22 So, I guess what I'm trying to say here, 23 systems safety is really not new to the industry, and I 24 would like to point out, too, when we developed ATOS

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and our work in not only the ATOS Work Group, but our follow-on development of ATOS, we've been working handin-hand with Sandia National Labs, and they have a significant amount of experience in systems safety working with handling our nuclear weapons.

DR. BRENNER: Thank you. And what happened to the previous oversight system, the PTRS? Is it still in effect or did it -- ATOS completely replace j it?

10 MR. YOUNGBLUT: PTRS is still in effect for 11 about a 140 large air carriers. I guess I didn't 12 mention, but ATOS is only applicable to the 10 largest 13 air carriers in this country now. We've only 14 implemented ATOS for the top 10.

DR. BRENNER: Okay. When was it implemented? MR. YOUNGBLUT: It was actually implemented in October of 1998. However, we did not begin the first surveillance under ATOS and Systems Safety until February of 1999.

DR. BRENNER: So, we have about two years of experience with the 10 major carriers on ATOS? MR. YOUNGBLUT: We're working -- we're coming up on that.

24 DR. BRENNER: Can you provide a brief

1 overview of how ATOS works?

MR. YOUNGBLUT: Yes, I can, and what I'd like 2 to do is I have like three slides, if I could kind of 3 4 walk through those. 5 Okay. The first slide here is -- are the 6 Systems, Subsystems and Elements of ATOS, and these are 7 the areas that we look at when we do our oversight and our surveillance of the air carrier. 8 You can see here that the darker blue are 9 10 seven systems, and then the gray areas are 14 subsystems, and then we have a total of 88 different 11 12 elements or areas that we look at when we do ATOS 13 surveillance. DR. BRENNER: If I understand, these are all 14 15 the areas that you would cover under an ATOS program? 16 The 88? 17 MR. YOUNGBLUT: Yes. 18 DR. BRENNER: Okay. MR. YOUNGBLUT: Now I'd like to just give you 19 an overview of the ATOS System or the eight ATOS 20 Process Modules. 21 2.2 We'll go ahead and start off with Module 1 or 23 System Configuration. What goes on in there is actually if a new applicant would come in and want a 24

121 certificate, CSET, Certification Standardization
 and Evaluation Team, would assist the local FSDO in
 that certification process.

Also in here is the CSET Team would go ahead and develop a recommended staffing standard for that to not only certificate but continue to surveil that new applicant.

8 Also in here is where the data collection 9 tools and our job aids are actually developed here.

10 Now we can go on over into our Certificate 11 Management Module or Module 2, and I have a little more 12 of an in-depth chart to explain that.

As I mentioned in the first chart that I showed you, we had the seven air carrier systems with the 14 subsystems and 88 elements. Well, at the top of this chart, you see the seven air carrier systems. That's what we're looking at, and then we go down the left-hand side, and we see that arrow.

Here's where in Module 2 is where we're actually going to plan that surveillance for that air carrier for the year. So, we'll develop that unique comprehensive surveillance plan for that particular air carrier, and these are -- I'm going to go through the tools now that that Certificate Management Team would

1 use to plan.

2	For example, Alaska's Surveillance Plan for
3	the year. The Alaska Certificate Management Team would
4	get together and meet all together and go through our
5	two risk management tools, and that's where we're going
6	to identify the risks that Alaska Certificate
7	Management Team believes are inherent within Alaska
8	Airlines Systems.
9	The first tool is the System Safety Analysis
10	Tool, and that looks at six different areas, really
11	high-level areas, of safety within Alaska Airlines'
12	organization. We're looking at safety attributes.
13	We're looking at safety culture. We're looking at
14	communications, especially those with the FAA,
15	accountability with management, training programs, etc.
16	The results of that initial risk management
17	tool go into a more sophisticated tool, and these are
18	both automated, by the way, into our Air Carrier
19	Assessment Tool.
20	This Air Carrier Assessment Tool has 31
21	different risk indicators. Those 31 different risk
22	indicators are compared are looked at in
23	relationship to the 88 elements. Some of those risk
24	indicators include growth turnover, safety system risk

1 management, enforcement actions, self-disclosures,

2 lease arrangements, complexity of the aircraft,

3 different fleet mixes, etc.

DR. BRENNER: Just to make sure I understand, these are tools that the team would use in Module 2 to help plan surveillance of their certificate? It's which areas within those 88 deserve more attention or less attention based on going through these different guidances, is that accurate?

10 MR. YOUNGBLUT: Yes, that is accurate. 11 That's what we're doing here. We're trying to analyze 12 the risks within that air carrier so that we can target 13 our inspector resources at those risks.

14 DR. BRENNER: Okay.

15 MR. YOUNGBLUT: When we get done with the Air Carrier Assessment Tool, that will produce a 16 17 comprehensive surveillance plan, and that comprehensive surveillance plan then is unique to that particular air 18 carrier, and it determines the priority on safety 19 attribute inspections which is a complex inspection, 20 21 and then it also produces the frequency that we would 2.2 go out and do what we call an "element performance 23 inspection".

24 DR. BRENNER: About how long does it take the

1 team to prepare their plan, going through these steps? MR. YOUNGBLUT: The plan itself is initiated 2 by the principals about 30 days in advance, and they 3 4 work through these automated tools and produce a draft. 5 That usually takes a day or two. They send it out to 6 their Certificate Management Team, all the inspectors 7 on their team. They review it, and then they come 8 together annually to finalize this plan, and they 9 usually meet for about three days, and after that, they 10 actually have that unique surveillance plan for the 11 carrier developed. 12 DR. BRENNER: And, so, does each of the 10 ATOS Certificates develop these plans? 13 14 MR. YOUNGBLUT: Yes, sir. 15 DR. BRENNER: Okay. And they revise them 16 every year, is that right? 17 MR. YOUNGBLUT: They're done every year, and also they can be -- as I said, ATOS is dynamic. 18 They can be changed at any time during the year because of 19 data that we have found, and based on that data, we can 20 change that plan to either do more surveillance in a 21 certain area or less, depending on what we find out. 2.2 23 DR. BRENNER: Okay. Thank you. I think I understand the Module 2. Does that cover Module 2?

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MR. YOUNGBLUT: That pretty much covers
 Module 2.

3 DR. BRENNER: Okay.

DR. ELLINGSTAD: Excuse me, Dr. Brenner. Could I ask -- is there some automated data logging database that supports this, you know, risk management aspect?

8 MR. YOUNGBLUT: Yes, sir. It's all 9 automated. The tools themselves are all automated.

DR. ELLINGSTAD: Are you tracking specific data on each of these risk aspects? Is there -- are there triggers built into that data system that does this or does this depend upon your inspectors reviewing documents?

MR. YOUNGBLUT: The first year, especially the first year, it depended on principal knowledge, the knowledge of what has been going on with that particular air carrier, from the whole team, and the team is composed of principal inspectors, those people that are at that Certificate Management Office, and those geographic inspectors.

22 So, they bring in their knowledge, especially 23 the first year. We did go, and we did look at other 24 databases to find out enforcement actions, incidents,

accidents, financial data, those types of things, to
 help us develop the initial plan.

3 DR. ELLINGSTAD: What I'm asking is, are 4 those data from those sources integrated into an ATOS 5 database here that you're using for this program? 6 MR. YOUNGBLUT: I guess I'm not sure --7 DR. ELLINGSTAD: To what extent is it a 8 quantitative kind of a methodology?

9 MR. YOUNGBLUT: It's -- at this point, it's 10 really more of a qualitative methodology rather than 11 quantitative, although when we do gather the risks and, 12 of course, the risks are noted, then that -- the program actually compiles based on the number of risks 13 identified in that particular air carrier system would 14 15 generate a priority for us to go out and do that 16 inspection and the frequency for us.

DR. ELLINGSTAD: Okay. But those priorities are basically the judgments of your program personnel? MR. YOUNGBLUT: They initiate from -especially the first year because of the lack of data that we had. We didn't have any data in ATOS. So, especially the first year.

23 DR. ELLINGSTAD: Thank you.

24 DR. BRENNER: Yes. You were going to give us

an overview of the rest of the modules, a brief
 overview.

3 MR. YOUNGBLUT: Yeah. Yes. Module 3 is our 4 Surveillance Resource Management. That's where we go 5 ahead, and we need to match the inspector resources and 6 the funds that we need and the training that's required 7 of those inspectors, that we need to accomplish that 8 surveillance which we derived in our Certificate 9 Management Module.

I think the significant part of this is that first in ATOS, we determine what surveillance we need to accomplish. Then we get the resources we need rather than doing it the other way around, whether we when we plan our surveillance based on the amount of resources we have.

Going around the circle on Module 4, that's where we actually go out and we do surveillance under ATOS, and there are two types of surveillance under ATOS.

As I mentioned, the Safety Attribute Inspection or SAI. That is a complex inspection where we really get into depth. We look not only for compliance, but we're looking for those safety attributes which I mentioned in my example of the

1 carry-on baggage issue.

2 MR. HAMMERSCHMIDT: Excuse me. Mr. Youngblut, up here. Could you give us another couple 3 4 of examples of an in-depth surveillance activity? You 5 mentioned the baggage, but could you give just a couple 6 of others? 7 MR. YOUNGBLUT: Sure. One of them would be an air carrier's Continuous Analysis and Surveillance 8 9 There is an element under our Maintenance System. 10 Organization to look at that, and within that particular inspection, I actually have the data 11 12 collection tool or job aid here for that. That has a 148 guestions in those six areas which I mentioned. 13 Responsibility, authority, controls, procedures, 14 15 process measures and interfaces. So, that would be 16 one. Another one in the maintenance area is AD 17 Management. What's that air carrier have for system 18 for AD management? 19 20 MR. HAMMERSCHMIDT: AD? 21 MR. YOUNGBLUT: I'm sorry. MR. HAMMERSCHMIDT: Airworthiness Directive? 2.2 23 MR. YOUNGBLUT: Airworthiness Directive, yes. MR. HAMMERSCHMIDT: 24 Thank you. Thank you

1 very much. Please continue.

2	DR. BRENNER: Do they also examine airplanes
3	as well as the paperwork and the structure?
4	MR. YOUNGBLUT: Yes. In fact, that's really
5	the other type of inspection we do under ATOS, is an
6	Element Performance Inspection. It's kind of more like
7	what we do under traditional surveillance. However,
8	what we do when we go out and do that inspection, we're
9	looking at does that end product of that system is
10	that the product that we wanted?
11	Three things that we really look at when we
12	do an element performance inspection, is the air
13	carrier following those procedures, is are those
14	controls within that process effective, and are their
15	process measures effective? And compliance, of course.
16	DR. BRENNER: Okay. And then, you were going
17	to summarize the rest of it. I believe we can Mr.
18	Chairman, can we enter this exhibit into the docket?
19	MR. HAMMERSCHMIDT: Yes, indeed.
20	DR. BRENNER: Very good. Then perhaps the
21	witness could just summarize briefly the remaining
22	modules?
23	MR. YOUNGBLUT: Okay. In Module 5, that's
24	where we go ahead and report our findings, and again
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1 that's an automated web-based product.

Module 6 is something new to what we've done 2 in Flight Standards. We have an Evaluation Module. 3 We have a Data Evaluation Program Manager here. 4 That's 5 their title. They look at all of the surveillance 6 reports that are coming into the system, to ensure 7 they're clear, concise and accurate, and if they don't meet certain data quality quidelines, they're returned 8 9 back to the inspector to be corrected. 10 The seventh module is our Analysis Module. 11 Very important for ATOS. It's the least developed of 12 all the modules, but in there, we would have an analyst who would look not only at ATOS data coming into the 13 system but would look at other data and assist the 14 15 principal inspector in determining what the risks are and how we should proceed with some of those risks. 16 17 And, finally, the last module is our Implementation Action, and that's where we need to 18 close the loop on everything that we've found within 19 this process. 20 One important thing I'd like to point out is 21 2.2 that the circle down here in the lower left, and that's 23 the Continuous Improvement. That's my office, and when we implemented ATOS, we knew we were going to have some 24

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challenges and some problems. So, we had already
 established that office to deal with those issues.

3 DR. BRENNER: Thank you. In January, the 4 Safety Board held a hearing on the accident at Little 5 Rock, Arkansas, and at that time, we were told that 6 only one of the 10 ATOS carriers had an analyst. I 7 think that was the Module 7. We were also told the FAA 8 was trying to hire more.

9 Can you update us as to what progress has 10 been made in the last year?

11 MR. YOUNGBLUT: We do have one analyst on 12 board, and we were fortunate that that analyst was a qualified OARAN and inspector, so we could hire them, 13 14 but due to our hiring freeze, we were unable to the 15 last couple of years, but we've just gotten authority to start hiring those analysts, and we're in that 16 17 process right now, and we should have them, all 10, on 18 board, you know, some time in February.

DR. BRENNER: Now, the analyst appears to be an important part of the ATOS System, the philosophy to retarget surveillance to monitor trends. Can you run -- how are the certificates able to run an ATOS Program without the analysts?

24 MR. YOUNGBLUT: Well, first, I'd like to say,

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1 you know, without that analyst position, without that 2 analyst in an analytic module, ATOS will never reach 3 its potential.

4 But how have we -- you know, how have we operated for almost the last two years without that? 5 6 Under our traditional surveillance, we always have the 7 principals, you know, had to really be the person that's looking at that data coming in and making those 8 9 decisions, and, so, that's really how we've operated 10 the last two years, with the principal filling that 11 job.

MR. CLARK: Dr. Brenner, let me ask a question. Where are these 10 analysts that -- where are they going to be positioned? Are these 10 for specifically Alaska Airlines or for the entire industry?

MR. YOUNGBLUT: Sir, they'll be located at each one of the Certificate Management Teams. So, Alaska will have one in their office in Seattle, and then, you know, the other nine CMTs will have their analysts at their local CMO.

22 MR. CLARK: So, there'll be an analyst at 23 each airline essentially?

24 MR. YOUNGBLUT: At each Certificate

1 Management Team, yes.

2 MR. CLARK: And how many airlines will each Certificate Management Team handle? 3 4 MR. YOUNGBLUT: Each airline has their own 5 Certificate Management Team. 6 DR. BRENNER: In 1999, the General Accounting 7 Office issued a report on ATOS, in which it spoke of the program's potential safety gains. However, the 8 9 report also noted problems in the implementation 10 reporting of ATOS inspectors were not effectively trained to use the system, and that quidance for 11 12 planning and performing inspections was not very 13 effective. Has the FAA improved its training and its 14 15 guidance since the GAO report? 16 MR. YOUNGBLUT: We've come a long way. We've 17 come a long way in the last 18 months. The initial training has been totally revamped, turned into an 18 eight-day course down in Oklahoma City. The feedback 19 on that has been that it's greatly improved. 20 Also, I mean, my office has produced a lot of 21 guidance. We've produced guidance on how we plan 2.2 23 surveillance, how we implement surveillance, how we report it, data quality guidelines for data evaluation 24

program manager. We've produced guidance for managers
 and supervisors, how you oversee this process.

To follow that up, this last year, from February through April, we did a -- my office did what we call a Standardization Seminar, and that seminar was very application-oriented. How do we really do ATOS? That was a three-day seminar for principals and managers down in Oklahoma City.

9 Then we took that out on the road, and we did 10 a one-day seminar for all the ATOS Certificate 11 Management Team inspectors at their locations.

DR. BRENNER: One complaint that the Safety Board has heard from inspectors is that the ATOS geographic inspectors, while they're assigned to the certificate, actually work for local Flight Standards Office, and I guess the complaint is that the principals feel often that the geographic inspectors are out of their control.

19 This came up in the investigation. The 20 principal maintenance inspector from Alaska Airlines 21 complained of this problem and felt that it led to a 22 deterioration of the geographic surveillance.

Is this a common problem? Common complaint?MR. YOUNGBLUT: It has been a common

complaint, and it has been a problem, and I think we've recognized it as a problem, and we have -- in fact, we initiated a work group about three months ago, and they have already developed a white paper that addresses these concerns.

6 They're going to be actually briefing the 7 Director soon, and if those recommendations are 8 accepted, they should take care of that problem.

9 DR. BRENNER: Okay. And another complaint is 10 that the workload of learning the new ATOS System may 11 be so high, that it takes -- it may be prohibitive. 12 For example, again in our investigation, the PMIs 13 suggested that inspectors were too caught up doing ATOS 14 to actually go out and do any surveillance.

15 Is that a common complaint?

MR. YOUNGBLUT: You know, I think that might have been a concern the first month or two that we started doing ATOS surveillance, and a key to that is when we do ATOS surveillance, it's so different than what we used to do.

Under ATOS, inspectors need to do quite a bit of spin-up or study before they actually go out there and do that surveillance. They need to look at that data collection tool and job aid. They need to figure

1 out what -- where they need to go, what they need to 2 see to be able to answer all of those questions. They 3 need to review those company airline procedures, so 4 that when they go out there, and they do observe, they 5 know what to expect. They know what to -- what they 6 should see before they ever get out there.

7 And another thing. They need to review all 8 of those Federal Aviation Regulations that are 9 associated with that inspection. So, they need to be 10 prepared to go out there and do that because under 11 ATOS, we're not so much interested in numbers of 12 inspections as we're interested in quality.

13 So, we need to get a quality inspection to 14 get quality data, and then we want to make quality 15 decisions. So, the first couple times an inspector goes out and does an inspection, there is some spin-up 16 17 time, and we realize that, but as we go further down 18 that learning curve and inspectors become more familiar with ATOS surveillance, I don't think that's a real 19 20 concern.

21 DR. BRENNER: What is the effect of ATOS on 22 enforcement?

MR. YOUNGBLUT: ATOS did not change anythingwith our enforcement policy.

1 DR. BRENNER: Okay. I understand that your office prepared data pre-ATOS implementation and post-2 3 ATOS, comparing FAA enforcement actions at the ATOS 4 carriers, is that right? MR. YOUNGBLUT: Yes, sir. 5 6 DR. BRENNER: What did you find in comparing 7 the data? 8 MR. YOUNGBLUT: In an overall sense, we found that the number of enforcements were right around 400 9 10 per year, looking back from 1995 to 1998, and then, 11 when we implemented ATOS in 1999, enforcements did go 12 down to about 300 or so. So, maybe about a 25-percent reduction, and it looks like the enforcements since 13 1999 have come right back up to pre-ATOS levels. 14 15 DR. BRENNER: So, it could suggest a reduction initially that maybe changes -- has gone back 16 17 now the second year, is that -- how would you interpret 18 that? MR. YOUNGBLUT: Well, I have heard that 19 several of the inspectors and maybe the Certificate 20 21 Management Teams somehow got the idea after their 2.2 initial ATOS training that in an ATOS environment, we 23 weren't going to use enforcement, and ever since that word has gotten to my office, we've been out there 24

preaching that ATOS does not affect what we do in
 enforcement at all. ATOS did not change enforcement
 policies.

4 DR. BRENNER: What is the System Analysis 5 Team, a SAT?

6 MR. YOUNGBLUT: A Systems Analysis Team is a 7 collaborative group, and it's a collaborative group, 8 and, first of all, its purpose -- I mean, its purpose 9 is to identify a root cause of a problem.

10 We've already identified a problem. Now we 11 need to find out what the root cause of that problem is 12 and how we might resolve that particular problem. The SAT would be composed of all the specialties and 13 expertise we need to resolve that problem. So, that 14 15 would probably -- that would be the FAA, of course, the carrier, could be a manufacturer, a parts supplier, a 16 17 fluid manufacturer, whatever expertise you need to 18 address the problem.

DR. BRENNER: So, it would be a sort of focused inspection that would be carried out with the industry participation?

22 MR. YOUNGBLUT: No. An SAT is not an 23 inspection. An SAT -- we've already identified a 24 problem, but we within the Certificate Management Team,

the FAA, do not have the expertise and the resources to
 properly address that problem.

3 DR. BRENNER: I see. And in an SAT, can 4 self-disclosure be used by the participating industry 5 group to preclude the need for enforcement?

6 MR. YOUNGBLUT: Self-disclosure's not 7 addressed within the ATOS policies, and that's a 8 totally different area. So, I couldn't go any further 9 than that.

DR. BRENNER: All right. Are there other statistics or trends that can be studied to indicate the effect of ATOS? How do we know whether ATOS is effective? How can we measure it?

14 MR. YOUNGBLUT: Well, I guess I'd like to 15 give you some anecdotal-type information there. First of all, one area that we're really proud of is within 16 17 the next couple months, we're going to be able to, 18 within the ATOS System, be able to in a near real time be able to tell what the compliance status is of that 19 carrier, and we've never really been able to do that 20 before, and the reason -- how we've done that is we've 21 2.2 actually tied the Federal Aviation Regulations to those 23 data collection tools in all of those questions that we asked when we go through and do that surveillance. So, 24

1 that's something we're very proud of.

2	MR. CLARK: What does compliance status mean?
3	MR. YOUNGBLUT: Well, the compliance status,
4	to me, that means we know I guess the easiest way is
5	what areas, if there's any non-compliance within that
6	air carrier, we would know those specific FARs, that
7	there may be non-compliance.
8	I guess another couple anecdotal things.
9	During up until last May, and that's the last I was
10	able to go back, the 10 different Certificate
11	Management Teams had done 34 different SATs. That
12	means to me that they've discovered problems, and
13	they're working in a collaborative mode to address
14	those problems.
15	One other one I want to mention is a major
16	carrier, one of the 10, we had done over 500 PTRS-based
17	inspections on that carrier, and the first time we
18	pulled out that safety attribute inspection or that in-
19	depth inspection to look at that air carrier's de-icing
20	program, we found really some major problems, a major
21	problem to the point where that air carrier's
22	procedures were not adequate to determine if their
23	airplanes were free of frost, ice or snow before take-
24	off.

1 So, anecdotally, I think we've really had 2 some successes.

DR. BRENNER: We have Exhibit 2-K-5, and this 3 shows data on all the ATOS certificates for the first 4 5 year of performance, and I was -- would be interested in your interpretation of it. Looking at Alaska, what 6 7 can we learn about the Alaska certificate from this? MR. YOUNGBLUT: Well, the Alaska Certificate 8 9 Management Team was very low on their percentage of 10 completed element performance inspections and kind of 11 right at the average or maybe a little bit below 12 average in their completion of safety attribute inspections for 1999. 13

DR. BRENNER: How would you interpret that? 14 15 MR. YOUNGBLUT: On this particular management report, since ATOS is really not -- it's not a numbers 16 17 qame. It's not the numbers of inspections that we're 18 looking at, but we're looking at quality. I interpret this as going to see how these CMTs are doing. Are 19 these Certificate Management Teams actually doing ATOS 20 21 or are they not doing ATOS?

22 So, I look at it at a very high level, and 23 this kind of tells me that Alaska's really not fully 24 involved in ATOS or that -- I'm sorry -- that Alaska's

1 CMT, I need to say that.

DR. BRENNER: I think maybe we should point 2 out for the audience the Alaska data would be the 3 second one down, ASAA, is that correct? 4 5 MR. YOUNGBLUT: Correct. 6 DR. BRENNER: And I believe it shows that 7 there was a 16-percent completion in this one type of 8 inspection, compared to the program that they set out, which is relatively low among the certificates, is that 9 10 11 MR. YOUNGBLUT: That's correct. 12 DR. BRENNER: Did -- in the work that was accomplished under ATOS during this year, did the 13 certificate identify any risks for future follow-up 14 15 through the measures? 16 MR. YOUNGBLUT: When the Alaska Certificate 17 Management Team used the -- went through the risk management tools, which I explained, especially the Air 18 Carrier Assessment Tool or ACAT, they found several 19 elements that were high criticality and turned out to 20 21 have significant risks. 2.2 DR. BRENNER: And why wasn't there more 23 follow-up on that? You say there were areas that were identified as risks that could be followed up on. 24 Do

1 you know why there was not more completion?

2 MR. YOUNGBLUT: Well, going back to this 3 particular management report, I think there's -- at 4 least there's a couple reasons. One of them is, 5 Alaska's Certificate Management Team was the smallest 6 among the 10 carriers.

7 The other thing, as far as the 16 percent on 8 the element performance inspections, they did 9 accomplish 31 safety attribute inspections, and those 10 are very comprehensive, and they do take a significant 11 amount of effort and time. So.

12 DR. BRENNER: Okay. Thank you. Since the accident, we understand Alaska Airlines has implemented 13 an augmented surveillance plan that combines ATOS 14 15 surveillance with surveillance under the earlier program, PTRS, and is it possible that some sort of 16 mixed surveillance program that integrates the best 17 parts of ATOS, PTRS, SPAS, S-P-A-S, and other programs 18 developed might provide a practical program and ease 19 the transition into ATOS? 20

21 MR. YOUNGBLUT: In fact, very recently, 22 within the last six months, the Director initiated a 23 special project to go back and talk to the different 24 Certificate Management Teams, went out and actually

1 talked to five of the different Certificate Management Teams to get their input as to how we could improve the 2 3 ATOS process, how we could improve acceptance of that 4 process, and the flavor of those recommendations were 5 that there were some good things, and there are some 6 good things, our traditional surveillance, that we need 7 to look into integrating those back into an ATOS 8 process. So, we are doing that now.

9 DR. BRENNER: And on the SPAS data, the 10 Safety Performance and Analysis System, the FAA spent 11 \$95 million developing it to analyze aviation safety 12 trend, and at our hearing in January, we were advised 13 that the FAA was trying to make it compatible with 14 ATOS. How is that going?

MR. YOUNGBLUT: We have already -- as our first step, we've allowed or we have the process in place and the automation in place so that all our SPAS users can go in via SPAS and do ATOS queries. So, they can go in and look at ATOS data via SPAS.

20 Our ATOS CMTs, they can go into SPAS as they 21 always have been able to. So, we're continuing to work 22 that issue, and we're thinking that we're going to have 23 more of the ATOS data available to SPAS in the October 24 time frame, but this is not an easy task because

1 there's two different types of data.

2	ATOS data is significantly different than
3	PTRS data. ATOS data, we collect data on over 20,000
4	questions. So, to figure out exactly, you know, what
5	that should look like in SPAS is not easy.
6	DR. BRENNER: In a 1998 recommendation, the
7	Safety Board recommended that the FAA modify its
8	inspection procedures in directions such as those
9	attempted by ATOS to identify systematic safety
10	indicators systemic, excuse me, safety indicators.
11	At the same time, the Safety Board has
12	expressed concerns about the implementation of the ATOS
13	Program, and ATOS has now been implemented for two
14	years on the major carriers, and we have not yet
15	completed the hiring of staff and are still working on
16	some of the connections of the program.
17	Do you think the FAA was too aggressive in
18	implementing ATOS?
19	MR. YOUNGBLUT: I don't think so. I was
20	there at the beginning when I was there when we
21	implemented this, and in my opinion, we had at least as
22	an equivalent level of oversight process within our
23	rudimentary ATOS, and we had nothing but to get better,
24	and as I had said before, we had reached the limit with

1 our traditional surveillance.

2	We couldn't inspect in any more surveillance.
3	So, I think we were there, and we needed to do it
4	then. We had at least an equivalent process, and I
5	think the fear was that if we didn't do it then, if we
6	prolonged this thing into more of a phased
7	implementation, maybe we'd never do it.
8	But again that decision, as far as
9	implementation, was made well above my level.
10	MR. CLARK: Let me ask a question. Do you
11	think you were too aggressive in shutting down the old
12	system before you have all of this in place?
13	MR. YOUNGBLUT: I think it would have been
14	real prudent for us maybe to have overlaid some type of
15	a transition plan when we did implement ATOS, so that
16	maybe we had a few of those comfortable things that
17	worked well under our traditional surveillance still
18	available when we implemented ATOS.
19	We didn't really have that transition plan.
20	We shut off the old one and started the new one. So,
21	looking back, I think it would have been a good idea to
22	have that in place, but that's hindsight is 20/20.
23	DR. BRENNER: What SAT inspections were done
24	under the Alaska Airlines certificate?

MR. YOUNGBLUT: Could you repeat that,
 please?

3 DR. BRENNER: In the first year of
4 implementation under the Alaska Airlines certificate,
5 were there SAT inspections conducted?

6 MR. YOUNGBLUT: There were none that I was 7 aware of -- well, as I mentioned previously, when I 8 went back in my data and went back to actually May of 9 this year, it had to be -- let me go back.

10 In my data, there were three airlines of 11 those -- that did not do any SATs from my data of the 12 10. Three did not, and Alaska was one of them from my 13 data.

DR. BRENNER: Okay. We've been talking about the lubrication issues, and first as a hypothetical case, suppose that an airline's lubrication schedule was not adequate for jackscrew lubrication. How would ATOS pick that up?

MR. YOUNGBLUT: Well, in ATOS, we look at air carrier systems, and this particular area would be in a maintenance system of ATOS, and as I showed in my first slide, we have under the maintenance area, we have over output the maintenance area, we have over different elements that we would look at, and when we do that surveillance under ATOS, it's very

1 comprehensive.

2	As I mentioned with our CAS data collection
3	tool, it's a 128 148 questions. So, we look at that
4	CAS Program or that air carrier's approved maintenance
5	program in great detail, and when we find a problem in
6	that area, we just don't fix that occurrence. We go in
7	and analyze that, look at the root cause, and take a
8	systems perspective at trying to fix that.
9	So, under ATOS, we might not find that
10	particular the grease lubrication schedule, but we
11	would be looking at several things like that and
12	looking at the quality of that whole process, and, of
13	course, that's one of the items within that process.
14	DR. BRENNER: Would ATOS monitor parts
15	wearing out, something of that sort?
16	MR. YOUNGBLUT: ATOS would look at that
17	appropriate maintenance system. It wouldn't be, you
18	know, keeping track of numbers or that type of thing,
19	but it would look at the system. It would look at the
20	air carrier system.
21	DR. BRENNER: So, if I understand that, ATOS
22	would make sure that the systems were in place at the
23	airline that might pick up these kinds of changes, and
24	is that right?

1 MR. YOUNGBLUT: That's exactly right. That's what ATOS is. We're looking to make sure those air 2 carrier systems have not only compliance but have 3 4 safety built into them. 5 DR. BRENNER: And how would the old system 6 pick up lubrication schedule issues? If the 7 lubrication schedule wasn't adequate for jackscrew lubrication, how would it pick it up? 8 9 MR. YOUNGBLUT: In my opinion, I don't think 10 it would. We'd have to bump into that and be at the 11 right place at the right time. 12 DR. BRENNER: Okay. Thank you, Mr. Youngblut. Mr. Chairman, that completes my questions. 13 MR. HAMMERSCHMIDT: Thank you, Dr. Brenner. 14 15 Do we have other questions from the Technical Panel? 16 MR. RODRIGUEZ: Yes, sir. Mr. Ivey. 17 MR. HAMMERSCHMIDT: Okay. MR. IVEY: Morning, Mr. Youngblut. You were 18 talking about the training that has increased since the 19 beginning of ATOS as it relates to an additional three-20 day course, I believe you stated, down in Dallas. 21 MR. YOUNGBLUT: We did a -- in fact, that's a 2.2 one-time standardization seminar that we did for the 23 principals and supervisors in Ok City, and then we 24

followed on with the one-day seminar for other ATOS
 Certificate Management Team inspectors.

3 MR. IVEY: So, is it fair to say that all 10 4 carriers now, and all their principals and supervisors, 5 have attended that additional training?

6 MR. YOUNGBLUT: Yes. Yes, they have, and I'd 7 like to just emphasize that that's been very 8 application oriented. How do we really do ATOS? 9 MR. IVEY: Was this additional training 10 created as a result of feedback to your office 11 complaining about problems of some sort out in the

12 field?

Yes, it was. 13 MR. YOUNGBLUT: Yes. We have worked with the different Certificate Management Teams 14 15 extensively. When we initially kicked off ATOS and started ATOS surveillance, within two months, we had a 16 17 meeting of all the principals, got feedback from them of what were the immediate problems that we needed to 18 address. We addressed those problems, and we continued 19 to work with them to resolve issues and challenges and 20 21 problems within ATOS.

ATOS is a process that is built for continuous improvement. It probably never will end. So, we get lots of feedback. We have an automated way

that we collect feedback and a problem reporting area of our ATOS reporting. We get a problem or an issue, we address -- we -- that gets numbered. We address all of those.

5 MR. IVEY: You mentioned the Certificate 6 Management Team. For us all here, would you explain 7 what the composition of a Certificate Management Team 8 would be?

9 MR. YOUNGBLUT: Yes. A Certificate 10 Management Team are those principals assigned to that 11 carrier, all of those inspectors that are co-located 12 with that principal at the Certificate Management 13 Office, plus some geographically-located inspectors 14 that belonged to that team.

MR. IVEY: And the principals are -- for the education of the audience here, that's the principal maintenance inspector, principal operations inspector, and a principal avionics inspector. Are those the three principals?

20 MR. YOUNGBLUT: Yes.

21 MR. IVEY: And you mentioned geographic team. 22 Explain what the geographic principals are or the 23 geographic inspectors, as I should say.

24 MR. YOUNGBLUT: They're remotely located away

from that Certificate Management Office. Under ATOS,
 they are part of that team. The team concept is very
 important in ATOS. They're full team members, and they
 get their work assignments from those principal
 inspectors.

However, as was mentioned previously, they
have a supervisor at that local office who they
actually report to.

9 MR. IVEY: It was my understanding that 10 initially, all Certificate Management Team personnel 11 would be fully aware of and have participated in the 12 Air Carrier Indoctrination Program, be thoroughly 13 familiar with all aspects of that carrier in their 14 field of expertise, to include the geographic 15 inspectors. Is that still in place?

MR. YOUNGBLUT: Yes, that is. To do ATOS surveillance, they have -- each inspector has to get air carrier-specific training, and, of course, they have to get the ATOS training down at the academy, and they have to get the string course.

You cannot do ATOS surveillance unless you'rereally ATOS qualified.

23 MR. IVEY: And having said that, with the 24 geographic inspectors, is that to imply that geographic

inspectors are totally dedicated to one airline now?
 MR. YOUNGBLUT: Those geographic inspectors
 assigned to that Certificate Management Team, their
 primary responsibility is to do that surveillance for
 that ATOS carrier.

6 In the old system, under PTRS, it MR. IVEY: 7 was my understanding that geographic inspectors could 8 walk around on the ramp, and an inspector could walk on to a United Airlines and then turn around and walk over 9 10 on to an American Airlines, and then turn around and walk over on to an Alaska Airlines, conducting three 11 12 inspections on three different airlines. Is that the 13 way the old system worked?

MR. YOUNGBLUT: That's the way the old systemworked.

16 MR. IVEY: And how about the new system now? 17 MR. YOUNGBLUT: The new system is if you're 18 an ATOS geographic inspector assigned to, say, the Alaska Certificate Management Team, you only look at 19 those Alaska operations. So, you're dedicated to 20 21 looking at only Alaska, and the reason why we did that 2.2 in ATOS is because we only want inspectors looking at 23 Alaska Airlines who know Alaska Airlines operations procedures, maintenance procedures, etc. They know the 24

1 air carrier.

2	MR. IVEY: Is there going to be an increase
3	in personnel out in the geographic area? Because I
4	have information that relates to a large carrier, one
5	of the largest in the country, and over on the
6	operations side, they have basically 11 people that
7	work on the certificate, and only six geographic
8	inspectors for an airline worldwide.
9	Can six geographic inspectors really
10	encompass and cover an airline that flies worldwide?
11	MR. YOUNGBLUT: That doesn't sound adequate,
12	but I guess without more information, I would be
13	speculating.
14	MR. IVEY: Sure. And in light of Alaska
15	Airlines, with the ATOS System, is there now an
16	increase being planned in the Certificate Management
17	Team to include increased number of geographic
18	inspectors as well as people within the Certificate
19	Management Team?
20	MR. YOUNGBLUT: That is planned, and I know
21	they've already increased their staffing of their
22	Certificate Management Team already.
23	MR. IVEY: And is that unique only to Alaska
24	or is it that you're finding that there needs to be an

increased amount of surveillance due to the numbers being low? And I only submit that, that throughout the other nine carriers, they're also going to need an increase in personnel?

5 MR. YOUNGBLUT: I think that has yet to be 6 determined. We're at the point now where after almost 7 two years of doing ATOS, that we're finding out exactly 8 how long it takes to do safety attribute inspections, 9 how long it takes to do element performance 10 inspections.

We have begun -- already begun a staffing study to look at these issues and to figure out, you know, what is an adequate level or number of inspectors for the different CMTs. But we haven't determined that yet.

16 MR. IVEY: You mentioned the Safety 17 Performance and Analysis System, SPAS. That's a 18 computer system that is based on inputting data. Is 19 that part of the ATOS System?

20 MR. YOUNGBLUT: SPAS is not really part of 21 the ATOS System. SPAS is an analytical engine that's a 22 software program that imports data from several 23 different databases and then produces reports. It has 24 some flags in there on these reports as to maybe things

that we need to look at, but really two different
 things.

3 SPAS is a software program that imports data 4 and massages that and develops reports, where, under 5 ATOS, ATOS is a surveillance oversight process.

6 MR. IVEY: According to the GAO, the SPAS 7 System cost in the neighborhood of \$95 million, and 8 this was supposed to talk to the ATOS System, and my 9 question to you is, is it fully implemented, and is it 10 running smoothly, so that those people associated with 11 SPAS and ATOS can take that data that these two systems 12 are supposed to be working together on and get the 13 necessary outcome and results?

MR. YOUNGBLUT: Right now, we don't have a full -- SPAS is not able to integrate or pull in all our ATOS data. What we do have in place right now is that SPAS users can go in via SPAS and look at all ATOS data through ATOS database queries. So, that's what we have in place right now.

20 MR. IVEY: You mentioned that of the 10 21 carriers that are using ATOS, one analyst of the 10 has 22 been placed on the property of that airline, is that 23 correct?

24 MR. YOUNGBLUT: That's correct.

1 MR. IVEY: And part of the eight blocks that you showed on the view earlier dealt with analysis, and 2 is it your testimony that basically since the analysis 3 4 -- the analysts have not been hired, that the 5 responsibility for analyzing the data falls upon the 6 three principals that are within that Certificate 7 Management Team to assess the data and then to set up a 8 comprehensive surveillance plan for the next year, is that correct? 9

MR. YOUNGBLUT: The principals have had to actually do that analytical function and look at that data coming in. They have, however, you know, had the assistance of their other Certificate Management Team members in developing that comprehensive plan.

MR. IVEY: Yes. And how long has this one analyst been hired, and for which airline does he work or she work?

MR. YOUNGBLUT: It's a he, and he's with Southwest, and I think he's been on board a little less than a year.

21 MR. IVEY: Hm-hmm. I think Dr. Brenner asked 22 you regarding Alaska, during the first year, if there 23 had been any SAT activity, and I believe you answered 24 in the negative for year one.

1 Has there been any SAT activity in the second year of implementation? 2 3 MR. YOUNGBLUT: I know that they started an 4 SAT after the accident. 5 MR. BERMAN: Excuse me, Mr. Youngblut. This 6 is up front here. Did they complete that SAT? 7 MR. YOUNGBLUT: I don't have that information. 8 MR. BERMAN: Okay. 9 10 MR. IVEY: The ATOS System is designed 11 initially for 10 carriers with additional new entrants 12 and perhaps ultimately the additional 140+, I think you used the number, to be brought on board. Is that still 13 14 the plan, and if a new entrant today were to start, are 15 they being brought in to the ATOS System? MR. YOUNGBLUT: Let me answer the second part 16 17 of that first. If a new entrant comes in today, they are not brought in to ATOS immediately. The decision 18 was made after the GAO report that we would not bring 19 any additional carriers into ATOS until we had all 20 eight modules fully functioning and operational. 21 2.2 MR. IVEY: And once the eight modules are 23 fully functioning, is the plan to bring the other 140+ carriers into ATOS and phase out PTRS? 24

1 MR. YOUNGBLUT: That's the plan for our 121 2 carriers.

3 MR. IVEY: And looking at the numbers that 4 were on the slide earlier, Alaska Airlines had around 5 16-percent completion rate there that first year. Do 6 you have any idea why those numbers were so low for 7 that carrier?

8 MR. YOUNGBLUT: Again, my guess is that they 9 were low on staffing. They had the smallest CMT, and 10 they did do a significant amount of work in Safety 11 Attribute Inspections.

12 MR. IVEY: It had been brought to our attention that the system was difficult to work, and 13 14 many of the inspectors were spending more time, I 15 think, as Dr. Brenner stated earlier, spending more time on the computer terminals than they were out doing 16 17 surveillance, and has this training incorporated an additional amount of knowledge so that this has been 18 cut down to where the inspectors are back out 19 inspecting systems and processes as opposed to sitting 20 at the terminal? 21 MR. YOUNGBLUT: I think that was an initial 2.2

22 mR. TOUNGBLUT: I think that was an initial
23 reaction to a new process, to tell you the truth. We
24 have a new process or a lot to learn, a learning curve

to get down, and the first couple months that we were doing this, yeah, there was a lot of learning to be done yet, and there's a lot of sitting in front of a computer, but I think that's what you face when you implement a new program. I know we're through that now.

7 MR. IVEY: When do you expect the ATOS eight 8 modules to be fully implemented, up and running, and 9 back down to your last little circle with continuing 10 fine-tune improvements as opposed to major

11 improvements?

12 MR. YOUNGBLUT: Well, we're looking to have all eight modules, including the analysis module and 13 implementation action, which are the modules which need 14 15 the most work, fully developed, the automation developed for those things, and alpha tested, beta 16 17 tested, and within the -- we're looking at probably 18 about 10 to 12 months having that done, and at that time, I think we're going to do an evaluation, some 19 type of an evaluation, to determine, you know, are we 20 ready to expand ATOS, and probably develop some type of 21 2.2 a transition plan, so that we gracefully transition new carriers into this ATOS environment. 23

24 MR. IVEY: Back in July, the FAA conducted an

1 airline review on the other nine carriers. Can you 2 comment on that, and as to the system they used, why 3 they did it, and did they use ATOS as the model to 4 conduct this airline review?

5 MR. YOUNGBLUT: That was really not part of 6 my program. That was a special inspection. I know 7 they used some ATOS tools and ATOS philosophy, but 8 that's as much information as I can provide you on 9 that.

10 MR. IVEY: Do you know whether they used the 11 complete ATOS program as you have designed to conduct 12 this review or did they just select certain aspects of the ATOS to go out and look at the other nine carriers? 13 MR. YOUNGBLUT: They -- to my knowledge, they 14 15 did not go back through and use the risk management tools, which we talked about earlier, but they did go 16 17 and they used our ATOS job aids or data collection tools. They did modify those slightly to collect that 18 19 information.

20 MR. IVEY: That's all the questions I have. 21 Thank you, Mr. Youngblut. Thank you, Mr. Chairman. 22 MR. HAMMERSCHMIDT: Thank you, Captain Ivey. 23 Are there other questions from the Technical Panel? 24 MR. RODRIGUEZ: Yes, sir. I have a few.

1

MR. HAMMERSCHMIDT: Okay.

MR. RODRIGUEZ: Mr. Youngblut, I'm interested 2 in the retention within the Certificate Management 3 4 Teams. Across the board, could you comment on what 5 kind of turnover you -- they're experiencing or is that better asked of some other witness? 6 7 MR. YOUNGBLUT: No. I think I can address that, at least in a general sense. The first year that 8 9 we implemented ATOS, we had fairly significant 10 turnover, especially in those ATOS geographic inspectors. In fact, almost a third of them turned 11 12 over. We've gotten through that, though. 13 I don't think the original ATOS geographic inspectors knew 14 15 exactly what this job entailed because it does entail more travel, significantly more travel than they were 16 17 used to doing, and plus there are promotion opportunities within Flight Standards, and when those 18 promotion opportunities came up, a lot of them took 19 20 those. MR. RODRIGUEZ: Well, would you know for the 21 2.2 last year what the turnover rate is? 23 MR. YOUNGBLUT: It's significantly lower than what it was. I couldn't tell you exactly. 24

MR. RODRIGUEZ: Well, either in absolute 1 values or in relative values, could you give me a 2 figure, estimate? 10 percent? Lower or --3 4 MR. YOUNGBLUT: No. I'm thinking the 5 turnover may be about 10 percent total in our 6 geographic workforce. So, right now, we have about a 7 150 ATOS geographic inspectors, give or take probably 8 about 15. 9 MR. RODRIGUEZ: The other question that I 10 have with respect to staffing has to do with the initial implementation. In Alaska's case, as I 11 12 remember, and please correct me if I'm wrong, it was in the Certificate Management Team was either 11 or 12 13 people, is that -- in that ball park, is that right? 14 MR. YOUNGBLUT: I recall it was 19. 15 19 people, including the ATOS geographics assigned to 16 17 them. MR. RODRIGUEZ: 19, and what is it now? 18 19 MR. YOUNGBLUT: I think we're up around 30. MR. RODRIGUEZ: 30 and counting or is that 30 20 21 adequate? 2.2 MR. YOUNGBLUT: You'll have to ask somebody 23 else really that question. 24 MR. RODRIGUEZ: Okay. Is this team

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1 relatively comparable to those teams at the other nine 2 carriers in staffing?

3 MR. YOUNGBLUT: With the increase in
4 staffing, it is. Prior to that increase in staffing,
5 they were significantly lower than most of the CMTs.

6 MR. RODRIGUEZ: Is there any particular 7 reason or reasons that you could offer why they missed 8 the estimate between 19 and where they wound up at 30?

9 MR. YOUNGBLUT: I guess we'd just have to go 10 back. When we implemented ATOS, we implemented ATOS on 11 top of the structure that was already there. We didn't 12 do a special staffing study to see did we need 13 additional staffing to do ATOS. So, we implemented 14 ATOS with the number of inspectors that were there.

Now, I would like to go back in our Module 3, as I discussed, when you go through, and you develop your surveillance plan for that year, there is a process in place there, if you do not have the inspector resources you need to accomplish that plan, how you go get those, and, so, it's built in in ATOS. MR. RODRIGUEZ: It seems to me I'd seen a

22 recent news release or something about a hiring freeze
23 at the FAA for three years or something of that nature,
24 is that correct?

1 MR. YOUNGBLUT: I know we've been under a hiring freeze for the last couple years, and a lot of 2 our Certificate Management Teams are hurting because 3 they have not been able to backfill positions. 4 5 MR. RODRIGUEZ: With the hiring freeze, where 6 did the additional 11, for instance, in Alaska, where 7 would they have come from? MR. YOUNGBLUT: Again, I really can't answer 8 I think that's a higher-level management 9 that. 10 question. 11 MR. RODRIGUEZ: All right. The other area 12 where I'm confused has to do with analysts. I got the impression -- I've had several briefings on this 13 14 program, and I got the impression that there were 15 analysts working at the carrier, the Certificate Management Office, for instance, Alaska has a CMET or 16 17 whatever he's called, and I had the impression that there were some analysts who worked with the data from 18 all of the carriers, a cumulative kind of analysis, is 19 that correct or is that wrong? 20 MR. YOUNGBLUT: Well, we have some analysts 21 2.2 at Headquarters that will assist the different 23 Certificate Management Teams to try and look at

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national type of data. But we didn't have any in

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Alaska's CMT. We didn't have any analytical or
 analysts there.

3 MR. RODRIGUEZ: Then let me ask it directly. 4 Does the FAA intend to hire 10 analysts for the ATOS 5 Program one to be stationed at each carrier and that's 6 the sum total of what will be done in this cycle of 7 events where the analysis is done?

8 MR. YOUNGBLUT: Absolutely. It's -- we're 9 doing it right now.

MR. RODRIGUEZ: How many are on staff at this time?

MR. YOUNGBLUT: We only have one analyst at one CMT right now, although that might have changed in the last two or three weeks, based on our hiring.

MR. RODRIGUEZ: I was briefed on November 30th that there were -- they had hired five analysts this summer. Who were they?

18 MR. YOUNGBLUT: The -- we hired five 19 additional -- five analysts this summer, and those 20 analysts ended up in our Headquarters Group out at 21 Dulles.

The original plan for those analysts was to go to the Certificate Management Teams. However, at that time, we didn't think we were going to be able to

hire 10. So, it was like okay, let's go to, you know,
 Option B, and how else are we going to do this?

But now we've got the authority to go ahead and hire the 10 analysts. So, now we've got five at Headquarters, and we're getting 10 more.

6 MR. RODRIGUEZ: What is -- now, I'm back to 7 my question. What's the difference between those five 8 out at your place and the 10 that are out in the field, 9 if anything?

10 MR. YOUNGBLUT: Well, the five that are out at Dulles at our unit there will look more at national 11 12 issues and develop reports for national-type users, where those analysts that are going to be stationed --13 that are going to be out there at that Certificate 14 15 Management Team, they're going to be working hand-inhand with that principal -- hand-in-hand with the 16 17 principals, hand-in-hand with the CMTs.

18 They're going to have an intimate knowledge 19 of that particular CMT and that air carrier. They're 20 going to be able to really paint some pictures that 21 principals have not been able to see because principals 22 are inspectors, and they just don't have the same 23 perspective when it looks at looking at risk as an 24 analyst does.

1 So, it's really kind of a unique thing for those analysts out in the field. They're really going 2 to be a vital part of what we're doing here. 3 4 MR. HAMMERSCHMIDT: Mr. Rodriguez, excuse me. 5 I notice that the clock just turned 12:30, and we'd like to take a break about each hour and a half, and 6 7 I'm getting some signals that we've got some people 8 that really need to take a break. So, why don't we 9 interrupt your line of questioning for 15 minutes, and 10 you may continue discussing the Air Transportation Oversight System, ATOS, --11 12 MR. RODRIGUEZ: Yes, sir. Just be on notice that my memory has already been demonstrated guite 13 14 adequately here in this hearing. 15 MR. HAMMERSCHMIDT: Okay. We're in recess for 15 minutes. 16 17 (Whereupon, a recess was taken.) MR. HAMMERSCHMIDT: This public hearing is 18 now back in session. We will allow Mr. Youngblut the 19 opportunity to get comfortable and well situated again, 20 and, Mr. Rodriguez, are you ready to proceed with your 21 2.2 questions? 23 MR. RODRIGUEZ: Yes, sir. MR. HAMMERSCHMIDT: Okay. Mr. Rodriguez, 24

1 while you're pausing there, let me make an

2	administrative announcement concerning our lunch break.
3	Because this is Saturday, the places that are
4	open to get lunch in this building complex that we're
5	in more limited than they would be on a week day.
6	Therefore, because we've got an indication that one may
7	be closing at 2, which is sort of one of the key
8	opportunities upstairs, I believe it would be best for
9	us, rather than breaking for lunch at 2, we will break
10	for lunch at 1:40, and we will take a lunch break of an
11	hour and 10 minutes. Therefore, the lunch break today
12	will begin at 1:40, and we will return at 2:50, just so
13	everyone will be aware of what the game plan is in
14	terms of our time line.
15	Mr. Rodriguez?
16	MR. RODRIGUEZ: Mr. Youngblut, which carrier
17	has the analyst? I may have missed that if you gave it
18	earlier.
19	MR. YOUNGBLUT: That's Southwest Airlines
20	CMT, Certificate Management Team.
21	MR. RODRIGUEZ: And Alaska does not have one
22	now?
23	MR. YOUNGBLUT: That's correct. Alaska does
24	not have one, unless they've hired one in the last

1 month.

MR. RODRIGUEZ: In earlier testimony, you 2 referenced a white paper that was being drafted. 3 Does 4 that contemplate any classroom or additional 5 amplification or are you just going to mail that out to 6 the teams? 7 MR. YOUNGBLUT: That particular white paper, 8 if I recall, was the recommendations of the geographic 9 ATOS -- excuse me -- the ATOS Geographic Work Group. 10 They developed a white paper, and that white paper has a recommendation how to address those issues, what the 11 12 geographic inspectors reporting to a supervisor at their local office or at their Flight Standards 13 District Office, but yet they really do work 14 15 assignments for those Certificate Management Team 16 principals. That was the issue really with that white 17 18 paper. 19 MR. RODRIGUEZ: Are you aware of any problems or misunderstandings within the Certificate Management 20 Teams with respect to policies of enforcement versus 21 self-disclosure? 2.2 23 MR. YOUNGBLUT: I'm not aware of any because nothing changed in ATOS. ATOS did not change 24

enforcement. It did not change anything to do with
 self-disclosure.

3 MR. RODRIGUEZ: And you've had no feedback or 4 questions coming in from the field about, for instance, 5 in a SAT, we put together a team, and how do we deal 6 with a mistake or an error or a violation that is found 7 while the carrier representative and an FAA inspector 8 are sitting side-by-side and discover it, that sort of 9 thing?

10 MR. YOUNGBLUT: I never had any questions 11 come to me, other than the last three or four days. 12 MR. RODRIGUEZ: You will be attending the 13 rest of the hearing?

14 MR. YOUNGBLUT: Yes, sir.

MR. RODRIGUEZ: Okay. Has anyone -- any of the carriers completed this -- you have a name for it, but the eight-part cycle?

18 MR. YOUNGBLUT: I guess, could you clarify19 that a little bit?

20 MR. RODRIGUEZ: Your ATOS model, the eight 21 steps that you have identified there, have any of the 22 carriers completed that cycle through implementation, 23 system configuration and certificate management 24 feedback?

1 MR. YOUNGBLUT: Well, that's the whole ATOS 2 process, and we go through that process, even the first 3 year we went through that process, although in some of 4 those modules, very rudimentary, like in the Analysis 5 Module, we didn't have an analyst there. So, the 6 principal had to fill that function.

But we have done -- we have worked in each
one of those eight modules but not to the extent that
we want to get to in the future.

MR. RODRIGUEZ: I may have missed it, but would you briefly describe for us, if you haven't already, Comprehensive Surveillance Plan?

MR. YOUNGBLUT: Sure. The Comprehensive 13 Surveillance Plan is generated through that Module 2 14 15 which I talked about. We do our two risk management tools, and those are automated tools that will produce 16 17 an automated comprehensive surveillance plan, and it 18 has some generic numbers for the amount of inspections that need to be accomplished, and then, based on those 19 risks that were identified in ACAT, those numbers can 20 21 either go up or down.

That surveillance plan then is unique for each one of these 10 ATOS carriers. Somewhat different than under our traditional surveillance.

1 MR. RODRIGUEZ: And would this be the plan 2 that would be -- that would receive the input from the 3 analysis and then subsequent implementation to change 4 it for the next year? Is that --

5 MR. YOUNGBLUT: Right. That would be the 6 initial plan, would be what we would start out with 7 working with. These are the inspections that that 8 Certificate Management Team feels they need to 9 accomplish.

10 Then, based on data coming into the system, 11 that could be changed, and we call that retargeting. 12 If we go out and through our surveillance and our oversight find areas and risks, we can go ahead and 13 what we call retargeting, and that would be, we can go 14 15 back in and go through that air carrier assessment tool again and develop a retargeted surveillance plan based 16 on the data that we have found. 17

18 MR. RODRIGUEZ: And at what frequency can you 19 retarget?

20 MR. YOUNGBLUT: We can retarget at any time. 21 MR. RODRIGUEZ: Do you get feedback on the 22 various carriers' comprehensive surveillance plans? 23 MR. YOUNGBLUT: I have access to their plans 24 and to their completion rates.

1 MR. RODRIGUEZ: And do you publish that? MR. YOUNGBLUT: We now put out, I quess it 2 3 is, three different management reports, and we put 4 those out to principal inspectors, to office managers 5 and division managers, so that they can get more of a 6 hands-on feel for what's going on out there. 7 Initially, this was a problem for us. So, 8 we're trying to provide information to management so 9 they can get more hands on in implementation of this 10 process. MR. RODRIGUEZ: Well, if the Comprehensive 11 12 Surveillance Plan is a -- can be retargeted at any time, at what frequency would you get these feedbacks? 13 MR. YOUNGBLUT: We do this monthly. 14 15 MR. RODRIGUEZ: Monthly. And is that public information? 16 17 MR. YOUNGBLUT: I think it's all FOIAble, 18 yes. 19 MR. RODRIGUEZ: Okay. MR. YOUNGBLUT: I think that is. So. 20 Т think one of the things you -- that is quite different 21 2.2 from our traditional surveillance, when we developed 23 that Comprehensive Surveillance Plan, we really never expected to do 100 percent of that, and the reason why 24

1 is situations change.

So, probably to accomplish 80 percent of 2 those things that you planned over the whole year would 3 4 be very good. But those are the 80 percent of the 5 things that you thought had the highest risk. 6 MR. RODRIGUEZ: That's all the questions I have, Mr. Chairman, and that's all from the Tech Panel 7 at this time. 8 9 MR. HAMMERSCHMIDT: Thank you, Mr. Rodriguez. 10 Moving next to the Parties to the public hearing for 11 questions. We will begin with Alaska Airlines and move 12 in a clockwise fashion around the Party tables. CAPTAIN FINAN: Thank you, Mr. Chairman. 13 Mr. 14 Youngblut, you mentioned several times or mentioned 15 that Alaska Airlines was one of three airlines that had not conducted a SAT in the initial stages of ATOS, and 16 17 by that, didn't you mean that a SAT had not been 18 conducted by Alaska Airlines Certificate Management 19 Team? That's correct, and I should 20 MR. YOUNGBLUT: have said these are conducted and organized by that 21 Alaska CMT or the FAA would initiate that. 2.2 I think 23 CAPTAIN FINAN: Okay. Thank you. very often, it's confusing between the airline itself 24

1 conducting or implementing something and the

Certificate Management Team. 2 No further questions. Thank you. 3 4 MR. HAMMERSCHMIDT: Thank you, Captain Finan. 5 Moving next to Boeing. 6 MR. HINDERBERGER: Thank you, Mr. Chairman. 7 Boeing has no questions for this witness. 8 MR. HAMMERSCHMIDT: Thank you, Mr. 9 Hinderberger. Going next to the Aircraft Mechanics 10 Fraternal Association. MR. PATRICK: Thank you, Mr. Chairman. 11 We 12 have no questions. 13 MR. HAMMERSCHMIDT: Thank you, Mr. Patrick. Moving next to the Air Line Pilots Association. 14 15 CAPTAIN WOLF: Thank you, Mr. Chairman. We have a few questions for Mr. Youngblut. 16 17 In the development of the ATOS Systems, were air carriers, industry or professional organizations 18 included or as an advisory board at all in the 19 development of the ATOS Program? 20 MR. YOUNGBLUT: During the initial 21 2.2 development, we did not bring the industry or the 23 unions into our deliberation process for developing 24 ATOS.

I would like to add, though, ever since we've rolled out ATOS, we have been trying to work with all interested aviation parties. We've met with the unions. We went -- we've met with the Air Transport Association. We have a continuing group working with the Directors of Safety from the 10 Certificate Management Teams.

8 So, we're trying to reach out, and our latest 9 thing is we went out and asked for information on 10 criticality of our different ATOS elements, and we're 11 getting feedback on that.

12 CAPTAIN WOLF: Okay. Thank you. Kind of as 13 a follow-up question to that, if you are calling upon 14 the various safety departments at the various air 15 carriers now, are any of the operators provided 16 training into the -- how the system -- how the ATOS 17 System works, and does it define the company's role in 18 using ATOS in the surveillance?

MR. YOUNGBLUT: We have had some requests for us to train the airline company people, but we -- the training that we have right now is not tailored to that at all. We would have to develop some type of different training to do that.

24 I guess, you know, we did bring the different

1 carriers in right after we -- just prior to

2 implementation of ATOS. The Directors of Safety and 3 the higher-level company people all came down to Texas, 4 and we gave them like a three-day orientation. That's 5 really all we've done at this point as far as educating 6 company people on ATOS.

CAPTAIN WOLF: Would that be part of the 7 PMI's responsibility, to ensure that the company, that 8 9 the carrier understands ATOS Program? In other words, 10 once they switch from the PTRS Program, and they go to the ATOS Program, it still sounds to me like a 11 12 developmental program that the PMI would be working very closely, either with the Safety Office at the 13 carrier or whoever he works with or the POI, just to 14 15 make sure that the airline is up to speed, and, you know, there's a good cooperation bond between the two 16 17 of them.

18 MR. YOUNGBLUT: No doubt, there's been a lot 19 of interaction, and it's kind of been a learning 20 process for everybody here, not only our principal 21 inspectors but the principal inspectors taking that to 22 the companies and talking about ATOS.

I would like to point out, though, that we've really tried to get all our ATOS information out there

to everybody. We have a public web site. All our data collection tools, job aids, they're out there for the public to look at.

We're not trying to hide anything here. We're trying to really educate everybody because we're going to get the most safety benefit if we're all trying to work system safety. So, the information is out there.

9 CAPTAIN WOLF: Okay. What is system safety 10 then? I mean, there's a lot of people back on the West 11 Coast and a lot of people probably here that perhaps 12 don't understand what you mean as far as system safety. 13 Maybe just a real short brief description.

MR. YOUNGBLUT: Well, to me, system safety is we look at the whole. We look at the whole process rather than just zeroing in on a cause. We look at what happened here. Why did this system fail? We just don't stop. We look at the people involved. We look at the procedures, cultural issues.

20 We look at everything. We just don't find a 21 cause, fix it and move on with system safety.

22 CAPTAIN WOLF: As you transfer from the PTRS 23 System all the data that you had from that, was that 24 somehow perhaps back fed into the ATOS System? In

other words, we had all that historical data from the older system. Has that somehow been fed into the new system, also?

MR. YOUNGBLUT: We're kind of at the transition phase right now, and that is related to the questions about SPAS. Right now, we have some performance-related or inspection data in PTRS prior to ATOS. Right now, for those 10 carriers, it's all within ATOS.

10 CAPTAIN WOLF: It seems from what -- from all 11 the discussions this morning that are talking about --12 that ATOS is still an active developing program, and one of the concerns that I have or perhaps the general 13 public would have is, is how would you -- how can you 14 15 transfer, you know, these 10 carriers into an ATOS System before it's completely and fully operational, 16 17 before it's fully developed?

We talk about that not all the modules are fully developed yet, and I'm just wondering whether some of the safety issues that were dealt with in the PTRS System, if they could fall through a crack in the ATOS System because the ATOS System hasn't been possibly fully, you know, developed to its full potential.

1 MR. YOUNGBLUT: On that one, I think you have 2 to go back and look at our PTRS System. Our PTRS 3 System is basically compliance-oriented, and there's 4 nothing in ATOS that diminishes that compliance 5 posture, but what we've done in ATOS is we've gone well 6 beyond just compliance.

So, even with our -- some of our -- a couple of our modules still at a rudimentary level of development, in my opinion, we're still far, far above where we were with just a compliance-based, event-based PTRS Surveillance System.

12 CAPTAIN WOLF: When you were showing your -the slides that you had earlier this morning there, and 13 I don't know whether you can bring that back up on the 14 15 screen or not, but I was trying to determine -- we were looking -- I think you had seven groups that were 16 17 identified there, and it was hard for me to see it on the screen, but I was trying to determine where exactly 18 maintenance fell into that. 19

I think one of them had something to do with technical inspections or technical review or something, but is it possible to show that again to see exactly where maintenance falls into that?

24 MR. YOUNGBLUT: Well, --

CAPTAIN WOLF: That was like the first
 organizational chart under Systems.

MR. YOUNGBLUT: Is this the correct chart? 3 4 CAPTAIN WOLF: No. It showed the seven 5 systems. There. So, underneath -- under which of 6 those systems would maintenance mostly fall under? 7 MR. YOUNGBLUT: Most of the maintenance is under our Aircraft Configuration Control. There are 8 9 actually three subsystems under there, Aircraft Records 10 and Reporting Systems and Maintenance Organization. Ι 11 can show you this other one. It probably gives you a 12 better idea.

You can see under System 1, Aircraft
Configuration Control, and then you have Aircraft
Records and Reporting Systems and Maintenance
Organization as subsystems with the elements underneath
them.

CAPTAIN WOLF: Okay. Talking about your
 system attribute inspections and the element
 performance inspections, how often do those occur?
 MR. YOUNGBLUT: Safety attribute inspections,
 and I know there's a lot of acronyms, but SAI is a
 safety attribute inspection. Those are the very
 comprehensive inspections.

Our initial goal when we -- well, the initial guidance was when we kicked off ATOS, was try to do all of those in one year. Well, we didn't get very far, and we found out that that was not very good guidance because when you accomplish all 88 of these, what you have really done is you've recertificated that airline, and that's a tremendous amount of work.

8 So, our guidance now is to try to get through 9 all of those in a three-year cycle. Then, when you 10 find, based on data that you get from your 11 surveillance, if you need to go back and look at that 12 system, then go back and do another SAI or safety 13 attribute inspection.

Now, I go over into the other type of inspection under ATOS, the element performance inspection. Those numbers are generated through your risk assessment tool, and those -- the standard is some of those elements, if it's a high criticality, you would do at least quarterly basis. Some of the other ones semi-annually, and some of them only annually.

If you had a lot of risks, you'd come out with a heightened figure, and then that Certificate Management Team could up those numbers of inspections to whatever they felt was required.

CAPTAIN WOLF: How would that determine what -- how critical the item is or a point of criticality of -- in other words, it seems like again it could -it's almost a subjective type of decision. MR. YOUNGBLUT: As I mentioned, the first year, it was, but now we're starting to get data,

7 numbers of data, and we're going to go back in the 8 future, and we're going to actually tie these other 9 databases to go right into that risk assessment tool. 10 Then those hard numbers are going to be coming in 11 there, and it would become far less subjective, a lot 12 more quantitative at that point.

CAPTAIN WOLF: I know Mr. Davey had a 13 question -- I'm sorry -- Mr. Ivey, and perhaps along 14 15 that same basis, where you said it would take approximately two years to determine if the system was 16 17 working properly as it pertained to the ATOS Program, and again I'm just curious as to how we want to make 18 sure we have proper surveillance and proper 19 coordination with the carrier now versus two years down 20 the line, we find out the data that we got perhaps 21 reflects something different, and we don't have a 2.2 23 system in place to perhaps catch something before there's a failure there. 24

1 MR. YOUNGBLUT: I guess I'd like to clarify 2 that because the way I recall, it's taken us about this 3 long to figure out exactly what our staffing and our 4 inspector requirements would be to -- for each one of 5 these Certificate Management Teams. That's kind of 6 where I was getting with the two-year thing, and we're 7 starting to figure that out now.

8 But as far as collecting surveillance and 9 inspection data, we're there right now. We have a lot 10 better and a lot richer and a lot more robust data in 11 that ATOS data repository right now than we've ever had 12 under our traditional surveillance for these 10 13 carriers.

14 CAPTAIN WOLF: Okay. Where are the members15 of Alaska's CMT team located at?

MR. YOUNGBLUT: The majority of that team is located, of course, in their Certificate Management Office up in Seattle. I couldn't tell you exactly where the assigned geographic CMT members are located. I would have that information, and I can get that to you later, if you need that. CAPTAIN WOLF: Okay. There's some good

23 points brought out about, you know, having the 24 inspectors and the geographic set-up and that type of

philosophy, but I'm wondering also if you have
 inspectors that are isolated to one airline perhaps.

Are they getting information internally from the FAA that would show what the standards are of the other air carriers? In other words, are they just isolated to Alaska, and do they get information niternally from other geographic locations as to how TWA is doing with their MD-80s or USAir or anybody else?

10 In other words, is there cross-utilization of 11 this information to where each geographic inspection 12 office is going to get cross-utilized information from 13 the other carriers, so that standards are applied 14 equitably across the board?

MR. YOUNGBLUT: Right now, all CMT members can look at any other CMT's surveillance plan. They can look at the results of those inspections, but what's really going to help us in this area is when we get those 10 analysts on board. That's really going to help us because that way, we're going to get a lot more information sharing through them.

22 CAPTAIN WOLF: Do you have any time frame 23 when those analysts will be coming on board?

24

MR. YOUNGBLUT: We're going to have them on

board, I think, by the end of February. We'll have
 them all hired. It's going to take us awhile to train
 them all and to get them up to speed.
 CAPTAIN WOLF: Okay. This kind of falls back

5 just -- just kind of talking about a C-5 check or 6 inspection of jackscrews, and maybe we answered it, 7 maybe we didn't answer it, and we talked about the 8 geographic inspectors and that type of thing.

9 But I was kind of curious as to how the FAA 10 or the ATOS System, if it would fall through a crack 11 somehow, in which it would justify the acceptance of 12 huge variations in inspection intervals.

So, in other words, if one air carrier 13 stretches their C-5 schedule out a little bit, and, of 14 15 course, that includes some other items that are in that check, that works for one carrier. Does the ATOS 16 17 System going to kind of catch -- pick that up with a red flag, if another carrier didn't expand out that 18 interval, that lubrication cycle, that C-5 check? How 19 would that be caught? 20

21 MR. YOUNGBLUT: That's really not built into 22 ATOS at this point.

23 CAPTAIN WOLF: Do you feel it's something24 that should be?

1 MR. YOUNGBLUT: I think working with the 2 industry and with the carriers, if that's a 3 requirement, we need to take a look at our oversight 4 process and determine whether we need to do that, and 5 there's probably a lot of other things, but we need 6 help, you know, from the industry and from the unions 7 to do that.

8 CAPTAIN WOLF: Now, it appears ATOS System on 9 paper and philosophy, I think, probably is a very good 10 system, and I think as pointed out here today, it's 11 under-funded, it's under-budgeted. You're under-12 staffed.

How do we take care of that? I mean, is 13 14 there proposals that are taken to Congress then to say 15 we need funding right now to take care of this? Because I can see there's a lot of frustration there on 16 17 your part, and there's a lot of frustration on industry's part, and, of course, from the traveling 18 public's part, that we need to have it funded, taken 19 care of and staffed right now, and how do you get 20 through that political process? 21

22 MR. YOUNGBLUT: Well, I mean, I kind of have 23 to go back and disagree a little bit here because from 24 where I'm sitting in my office, I've been able to get

the funds that I need to do -- to improve the ATOS
 process, improve the tools.

I've been able to do that. I could use more 3 people like everybody else to kind of do that faster. 4 5 So, you know, I've had the funds that I have needed. Ι 6 think the only -- the part that's kind of hurt us is the hiring freeze. We haven't been able -- we didn't 7 8 have the funds, I quess. That's why we had a hiring 9 freeze. So, we couldn't get the analysts on board, and 10 we couldn't really backfill, you know, for inspectors 11 who retired or left or whatever. So, that has kind of 12 hurt us.

The only other funding problem that we've 13 14 had, and that's probably throughout all of government, 15 is we get to September, and we kind of run out of travel money. So, that has been a problem, but I have 16 17 to say that we actually got a special authorization from Congress this last year for some automation 18 support money, and we got authorization to hire some 19 ATOS geographic inspectors. So, that's been kind of 20 21 the good news.

22 CAPTAIN WOLF: All right. I just hope that 23 possibly the Administrator, you know, could somehow, 24 you know, get you guys the additional funds and

1 staffing to make this program work.

2 Thank you very much. That's all, Mr. Hammerschmidt. 3 4 MR. HAMMERSCHMIDT: Thank you, Captain Wolf, 5 and moving lastly to the Federal Aviation 6 Administration. 7 Thank you, sir. Mr. Youngblut, MR. DONNER: 8 I think maybe some folks that are listening may be left 9 with the impression that when we turn on the ATOS 10 switch at a carrier, we turn off the SPAS switch, so to 11 speak. 12 Tell me, if a principal inspector at an ATOS carrier wants to go back into the old PTRS information 13 on his carrier, is he able to do that? 14 15 MR. YOUNGBLUT: Yes, sir. It's all that old PTRS information or, I guess, back from 1998, is all in 16 17 SPAS, and that's readily available to any inspector who wants to get in there and look at it. 18 19 MR. DONNER: Just one more question. You mentioned earlier in your testimony something to the 20 effect that soon, you would be able to use the ATOS 21 2.2 data to determine compliance. Can you say a little 23 more about that? 24 MR. YOUNGBLUT: What we've done is in our

1 data collection tools, and there's over 20,000

T	data collection tools, and there's over 20,000
2	questions, when we if you ask every question in
3	ATOS, you have about over 20,000 questions.
4	We have 2,256 Federal Aviation Regulations
5	that are applicable to most of the 10 carriers. Some
6	are not applicable, and we can select those as non-
7	applicable, of course.
8	We have went back and tied those Federal
9	Aviation Regulations to those applicable questions in
10	our data collection tools. If we have done all of our
11	ATOS surveillance, if we've completed all of those SAIs
12	and those EPIs, we'll literally be able to, within a
13	couple keystrokes, be able to tell what the compliance
14	status is of any of the ATOS carriers, and by
15	compliance status, I really if you're not in
16	compliance is what we want to know. That's what we've
17	done.
18	MR. DONNER: Thank you very much. Thank you,
19	sir.
20	MR. HAMMERSCHMIDT: Thank you, Mr. Donner.
21	Now, we move to the Board of Inquiry for any questions.
22	Mr. Berman?
23	MR. BERMAN: Thank you, Mr. Chairman. Mr.
24	Youngblut, could you tell me a little about the on-site

1 inspection under ATOS? I believe that's the EPI, is 2 that correct?

3 MR. YOUNGBLUT: That's correct.

4 MR. BERMAN: How much of that is looking at 5 hardware as opposed to looking at paperwork and the 6 other systems?

7 MR. YOUNGBLUT: That's almost all looking at 8 operations. That means we go out, and we go to the 9 maintenance floor. We see if that approved maintenance 10 program, those procedures are being followed, or we go 11 to the airplane, and we see if those flight operations 12 procedures are being followed, and again the EPI, element performance inspection, not only are the 13 procedures being followed, but are the controls 14 15 effective, and are their process measures effective, and are they in compliance? 16

MR. BERMAN: Okay. So, without the EPIs, under a surveillance program, under ATOS, are you pretty much dependent on the air carrier systems working properly, and your SAIs, which are trying to look at those systems?

22 MR. YOUNGBLUT: Well, if we only did the 23 SAIs, I think we would feel comfortable that the air 24 carrier had safety built into each one of those

1 processes.

2 MR. BERMAN: But you wouldn't be explicitly verifying that? 3 4 MR. YOUNGBLUT: Yeah. Exactly. Wouldn't be 5 able to verify, and what we do on our element 6 performance inspection, we go out there and sample, and 7 not in a statistical sense because we can never get out there enough to do that, but sample to the degree that 8 9 we get a real level of -- we're comfortable with that 10 process that was outlined in that safety attribute inspection, it's effective, and it's working. 11 12 MR. BERMAN: Hm-hmm. I just want to clarify for myself something that was based on what Mr. Donner 13 brought up. 14 15 Is it correct that no new information is being loaded into SPAS under the ATOS carriers? 16 17 MR. YOUNGBLUT: Right now, no new surveillance data. There is certificate management 18 information still going into PTRS and then into SPAS. 19 20 MR. BERMAN: Hm-hmm. MR. YOUNGBLUT: But it's only the 21 2.2 surveillance piece now for those 10 ATOS carriers that 23 is not going into SPAS. 24 MR. BERMAN: Any of the financial or the

1 other information that is external, you know, outside 2 FAA information?

3 MR. YOUNGBLUT: That information is still all 4 going into SPAS.

5 MR. BERMAN: Okay. And what's the status of 6 SPAS with regard to its analytical capabilities? You 7 spoke about -- that it is in operation, and it's 8 attached to PTRS, but what about the analytical basis 9 of it?

10 MR. YOUNGBLUT: I really can't answer that 11 one.

MR. BERMAN: I've gone back several years with SPAS here, and it was, I think, originally supposed to be somewhat of an automated tool that set flags if a combination of factors caused some worry. Is it doing that?

MR. YOUNGBLUT: It is doing that, but I couldn't -- I'm really not a SPAS expert, and, so, I can't go any further into that.

20 MR. BERMAN: Okay. Good. Well, we'll check 21 it with someone else later today, hopefully, because 22 last time we checked on it, that wasn't happening. 23 That was at the time of ValuJet, the flags were all 24 being looked at manually. Have to check that.

1 Could you describe -- is the SAT, is that similar to a safety attribute inspection but kind of 2 joint with the carrier and the FAA? How's that 3 4 different from a safety attribute inspection? 5 MR. YOUNGBLUT: It's totally different. 6 Systems analysis team. It's not an inspection. 7 MR. BERMAN: Yes. MR. YOUNGBLUT: It's a problem-solving 8 collaborative group. 9 10 MR. BERMAN: But it similarly looks at safety 11 systems, not at hardware and mechanics and --12 MR. YOUNGBLUT: It would look up -- it would look into whatever that problem was. The key to it 13 usually -- the problem has been identified, but we need 14 15 to find out what -- really what the root cause of that problem was, and how we would mitigate that problem, 16 17 and internally within that Certificate Management Team, 18 we just don't have the expertise. 19 MR. BERMAN: Okay. And on to another acronym, what's an ACAP and RACAP, and how do those 20 compare with NASEPs and RASEPs? I'm sorry. Four 21 2.2 acronyms. 23 MR. YOUNGBLUT: Yeah. I'm not sure that -we don't -- I mentioned an ACAT, Air Carrier Assessment 24

Tool, but -- and a NASEP were the only two that I - only recognize NASEP.

3 MR. BERMAN: Okay. Maybe I've got my acronym4 wrong. What's an ACAT?

5 MR. YOUNGBLUT: That's an Air Carrier 6 Assessment Tool. That's that risk management tool 7 which has 31 different risk indicators that we use. 8 MR. BERMAN: Okay. No. I was thinking of

9 something else, which is outside ATOS. So, it may not 10 be in your area.

11 The job aids that you have for ATOS, they 12 include a products section, is that correct?

MR. YOUNGBLUT: They include -- the safety
attribute inspections go through the six different
safety attributes.

16 MR. BERMAN: Is one of them a look at the 17 products of that safety system or --

MR. YOUNGBLUT: Well, it's to look at the product that that system delivers, yes. Is that the -you know, we -- the bottom line is we want to make sure that that product is in compliance and through that process has those safety built into it.

MR. BERMAN: And what's the source ofinformation for that part of the safety attribute

1 inspection, the products part?

MR. YOUNGBLUT: Most of the source for this 2 information is we go, and we look at that air carrier's 3 4 process, and through their manuals, through how -- what 5 are their procedures for accomplishing this process? It's more of do they have the infrastructure 6 7 in place, and is it all documented to be able to 8 accomplish this activity? 9 MR. BERMAN: That all seemed guite consistent 10 to me with how you've described the SAI, except for the 11 products review. Would that seem to be looking at the 12 outcomes of these systems? Does that exist? MR. YOUNGBLUT: That's really our element 13 14 performance inspection, where we look at the product. 15 MR. BERMAN: Okay. Gotcha. Have you looked at the process of the special inspections of the nine 16 17 carriers, that were, you know, done of the other nine major carriers? 18 MR. YOUNGBLUT: I haven't had time to even 19 20 read that report. 21 MR. BERMAN: Okay. Okay. Let's turn to the analysts under ATOS for a minute. What has the fellow 2.2 23 who's assigned to Southwest Airlines' certificate accomplished in the past year or so since, I guess, 24

1 he's been working in that position?

2	MR. YOUNGBLUT: He's really done some great
3	initial work. I did get a copy of during when
4	they planned their second year of surveillance or they
5	went through Module 2, and they did their ACAT, and
6	they're looking for data to get better information,
7	looking at those risk indicators.
8	He put together a package with graphs and
9	charts and pulled in information from other databases
10	which it was very enlightening for me because I'm
11	basically kind of the inspector thing. So, I only see
12	like black and white, but these analysts, they see a
13	lot of different colors when they start looking at this
14	data, and they can display it in a fashion that
15	communicates a lot better than words can to inspectors.
16	So, you know, I he's done some really good
17	initial work, and he's going to be a key member of that
18	initial cadre of those 10 because he's already been
19	involved in the process for awhile.
20	MR. BERMAN: Hm-hmm. And what data sources
21	do you remember him drawing from?
22	MR. YOUNGBLUT: He looks at accidents,
23	incidents, the PTRS data that was in there, financials,
24	enforcements. Did I mention that?

MR. BERMAN: No. Go ahead. Okay.

1

2 MR. YOUNGBLUT: SDRs, all of that other 3 information that's available out there.

4 MR. BERMAN: Are the principals able to do 5 anything like that, to that level, when they -- you 6 know, without the analysts at their airlines?

7 MR. YOUNGBLUT: There might be a couple out 8 there that could do that, but really their time needs 9 to -- they do other things with their time. They have 10 -- most of them are supervisors, and they work at a 11 higher level, and they just need that analytic support 12 for them to better do their job.

MR. BERMAN: I see. Okay. I'm sorry, I'm 13 skipping around here on lots of little questions in 14 15 different areas. You mentioned at one point, that ATOS 16 didn't change anything with respect to enforcement, I 17 think a couple of times, and then you talked to Mr. Rodriguez a little about that, but I don't think you 18 ever pinpointed -- in a safety attribute team, SAT, if 19 that's what -- I'm saying it right. 20

MR. YOUNGBLUT: Safety -- yeah.
MR. BERMAN: Safety audit team.
MR. YOUNGBLUT: Systems analysis team.
MR. BERMAN: Okay. Sorry. How would you

1 expect that team to function when an airline person and an FAA person are working elbow-to-elbow looking at 2 something, and they discover it at the same time? 3 Is that enforcement or is that self-disclosure territory? 4 5 MR. YOUNGBLUT: I'm not an expert on self-6 I know if we're doing an inspection, you disclosure. 7 know, I don't think the self-disclosure applies. When we're doing an SAT, I'm not sure. I would have to go 8 back and look at the policy myself, but I don't really 9 10 do that in what I'm doing right now. MR. BERMAN: Okay. Could we ask that the FAA 11 12 provide us that interpretation as soon as possible? We will question later on it, too. 13 If a -- if there was a situation where an 14 15 airline had planned to do and agreed to do a maintenance -- a change to its maintenance manual under 16 an MEO1 or some such thing, and then that was never 17 implemented, for whatever reason, what part of an ATOS 18 job aid would catch that? 19 20 MR. YOUNGBLUT: Well, to me, it would be -it may be the safety attribute we call interfaces, and 21 2.2 in fact, this came up yesterday in some of the 23 testimony that I overheard.

24 When the maintenance manual says one thing,

and a maintenance task card says another thing, that's exactly what we want to get to in ATOS because that's an interface, and those things -- those two documents should be consistent, and that's what we're looking for in interfaces.

6 The -- in safe -- or for emergency 7 evacuation, in that the flight attendant manual should 8 be consistent with the pilot's manual when it comes to 9 an emergency evacuation. Those types of interfaces, 10 that's what we're looking for.

MR. BERMAN: Okay. And I think some of the testimony we had earlier mentioned that sometimes an MEO1 would get inadvertently shelved or, you know, left on someone's desk. It seems like a process issue, you know. You're not going to find that out by looking on the maintenance floor. How could ATOS get at that? Could it get at that?

18 MR. YOUNGBLUT: I guess I don't really feel 19 comfortable answering that. I don't know enough about 20 the process to answer that one. I'm sorry.

21 MR. BERMAN: Okay. You mentioned that the 22 FAA found significant risks in the Alaska Air system in 23 the post-accident inspection. Is that -- am I 24 correctly characterizing that?

1 MR. YOUNGBLUT: When the Alaska Certificate Management Team initially went through their risk 2 planning tools, they did find in that regime, they did 3 find some significant risks with some high criticality 4 5 maintenance elements. 6 MR. BERMAN: And on what data were those risk 7 analyses built? MR. YOUNGBLUT: That was built -- they 8 9 actually did the risk analysis tools in December, 10 January -- December '98 or January of '99. So, it was 11 information prior to that. 12 MR. BERMAN: They were using 1998 information after the accident? 13 MR. YOUNGBLUT: Oh, no, no. Excuse me. 14 Ι 15 must not have been clear. During their first -- when they developed 16 17 their first Comprehensive Surveillance Plan, which was done in January of 1999, to do their surveillance for 18 the next year, when they went through that process, 19 they identified several maintenance elements that were 20 high criticality with significant risks. 21 2.2 MR. BERMAN: And do you know if the FAA 23 followed up on those elements as a result of the identification of those risks? 24

MR. YOUNGBLUT: I know some of those
 inspections were accomplished.

3 MR. BERMAN: Okay. I think we'll follow up 4 with the folks at the local office there and find out 5 that as well.

6 Why didn't ATOS identify the problems that 7 got identified after the accident, when the FAA pulled 8 its inspection then? Why didn't it find out about that 9 before the accident?

MR. YOUNGBLUT: I'm not sure. Could you give me a little bit more information?

MR. BERMAN: Well, I understand that the FAA post-accident came through, followed airplanes through C checks and such like that, the special inspection that was conducted and had a lot of findings, is that correct?

MR. YOUNGBLUT: Yes. I think they did have alot of findings.

MR. BERMAN: Why didn't those come out of the ATOS process?

21 MR. YOUNGBLUT: I think you have to go back, 22 and you have to go back and look at what was actually 23 accomplished at the Alaska CMT, what ATOS surveillance 24 was actually accomplished at that Alaska CMT during

1 that year prior to the accident.

MR. BERMAN: Okay. And I think you mentioned 2 that Alaska CMT wasn't fully involved in ATOS at that 3 4 time, but had they also shut down the PTRS-based system 5 at that point, also? 6 That question, I think, would MR. YOUNGBLUT: 7 be better provided -- better given to Mr. Pearson. MR. BERMAN: Okay. But, in general, didn't 8 you say that for the ATOS carriers, that replaced the 9 10 PTRS System? MR. YOUNGBLUT: Yes, that's true, sir. 11 We 12 shut off PTRS and went to ATOS. MR. BERMAN: So, would you say to summarize, 13 there was a deficiency in the EPIs at Alaska? 14 15 MR. YOUNGBLUT: I wouldn't necessarily say only the EPIs. I would say in all of the ATOS 16 17 surveillance that was planned. MR. BERMAN: So, the -- I was going to get to 18 those as well, but with the smaller percentage of EPIs, 19 there wasn't as much looking at hands-on things as the 20 FAA believed to be required? 21 2.2 MR. YOUNGBLUT: That's correct. 23 MR. BERMAN: Would you say that the surveillance was non-functional at Alaska Airlines? 24

1 MR. YOUNGBLUT: I wouldn't want to say that. MR. BERMAN: Okay. But it didn't catch 2 problems that later -- I mean, this is something we end 3 4 up asking after a lot of major accidents. Why weren't 5 the problems caught before? What's your explanation? MR. YOUNGBLUT: From my position and my 6 7 involvement with ATOS, I really can't answer that because I'm developing the process and better tools and 8 9 assisting in the implementation, but yet I don't get 10 involved with day-to-day, you know, how's it going out 11 there at the Certificate Management Team? 12 MR. BERMAN: Okay. Thank you very much, sir. No further questions, Mr. Chairman. 13 14 MR. HAMMERSCHMIDT: Thank you, Mr. Berman. 15 Mr. Clark for some brief questions, and then we will break for lunch. 16 17 MR. CLARK: You heard the testimony for the 18 last several days? MR. YOUNGBLUT: I've been here not all the 19 time. 20 MR. CLARK: Okay. All right. But you heard 21 about the tooling issues, non-certified tools or tools 2.2 23 that are not in compliance at the airline? MR. YOUNGBLUT: Actually, Mr. Clark, I missed 24

1 that part.

2	MR. CLARK: Okay. If there the special
3	inspection that went on found the number of findings,
4	56 findings, and some of them were high and medium.
5	With ATOS fully implemented, do you believe would it
6	be appropriate to have those inspections go on on a
7	yearly basis, to continue?
8	MR. YOUNGBLUT: That was brought up in fact
9	as part of the special project which I talked about,
10	going out to the CMTs, and we're considering something
11	like that, where we would go out and look at these
12	different Certificate Management Teams on some type of
13	a cyclical basis, maybe once every three years, to get
14	an outside look, to see how things are going with ATOS
15	implementation. So, I know that's being thought about.
16	MR. CLARK: Okay. On the issue of
17	enforcement levels, that when ATOS was implemented, the
18	enforcement levels went down. Is that because of the
19	lack of pursuit of enforcement items?
20	MR. YOUNGBLUT: I really don't have any
21	concrete information, other than, you know, there was
22	an impression out there, a false impression, that ATOS,
23	under ATOS, we would not do surveillance, but we've
24	tried to correct that.

1 MR. CLARK: Okay. Now, the enforcement 2 levels are coming back up?

3 MR. YOUNGBLUT: They're just about even with4 what they had been in the past.

5 MR. CLARK: Is that an indicator that ATOS 6 isn't any better than the last system? Well, for 7 example, if ATOS is really working, there should be 8 less enforcement findings if you're looking for them. 9 Is that the intent of ATOS?

MR. YOUNGBLUT: That -- I think maybe we're making a leap on that one, but the whole idea in ATOS is to be proactive and not just in a compliance arena, but to be proactive from, you know, a system safety arena, because we want more than just compliance.

MR. CLARK: Okay. All right. One more. The geographical inspectors, you said a lot of them did not realize the amount of travel involved. Are you fully funded on your travel for your geographical inspectors, and have you been?

20 MR. YOUNGBLUT: This year, this year, we are 21 fully funded. We're in good shape.

22 MR. CLARK: For the entire year of 2000 or 23 which year?

24 MR. YOUNGBLUT: For FY 2001. That's what

1 we're in right now.

2 MR. CLARK: You are now fully funded. What about last year? 3 4 MR. YOUNGBLUT: Last year, we -- it was 5 tight, and like I said, in September, we literally said no more because we'd run out of money. 6 7 MR. CLARK: Okay. Thank you. MR. HAMMERSCHMIDT: Thank you, Mr. Clark. I 8 9 hate to interrupt a good discussion here, but we are 10 going to break for lunch for one hour and 10 minutes. Mr. Youngblut, we still have just a very few 11 12 more questions for you. So, please expect to be back at the witness table, if you would, please, sir. 13 MR. YOUNGBLUT: Yes. 14 15 MR. HAMMERSCHMIDT: We're breaking for lunch 16 until 2:52. 17 (Whereupon, at 1:42 p.m., the public hearing 18 was recessed, to reconvene this same day, Saturday, December 16th, 2000, at 2:52 p.m.) 19 20 21 2.2 23 24

1 2 3 4 5 6 7 AFTERNOON SESSION 8 2:52 p.m. 9 MR. HAMMERSCHMIDT: Welcome back to our 10 public hearing, the National Transportation Safety Board's Public Hearing on the Alaska Airlines Flight 11 261 Accident Investigation, and Mr. Larry Youngblut is 12 13 still the witness at the witness table, and we had, I believe, concluded with Mr. Clark's questions when we 14 15 went into a lunch break. So, now we will go to Dr. Vern Ellingstad for any questions. 16 17 DR. ELLINGSTAD: Thank you, Mr. Chairman. Mr. Youngblut, you have made a fairly major issue of 18 the analysts that you hope to hire and made it clear 19 20 that you expect that that's going to be a significant improvement to the ATOS Program. 21 Let me try to understand. You have right now 2.2 in terms of these 10 airlines, there's one analyst 23 24 employed at Southwest?

1 MR. YOUNGBLUT: That's correct, sir. DR. ELLINGSTAD: And you have five analysts 2 doing a Headquarters function within the program? 3 4 MR. YOUNGBLUT: Actually, we have now, with 5 the additional five that got hired, we actually have 6 seven now. 7 DR. ELLINGSTAD: Okay. And they're doing --8 what do they do? 9 MR. YOUNGBLUT: They look at not only 10 surveillance data, certification data, all sorts of 11 safety-related data and produce reports for whoever 12 would request that information. 13 DR. ELLINGSTAD: But they're not targeted specifically on a particular carrier or --14 15 MR. YOUNGBLUT: When --DR. ELLINGSTAD: -- would that set of 16 17 analysts have for providing any information to Alaska's 18 Certificate Management Team? MR. YOUNGBLUT: When -- it goes back to when 19 we initially could not hire an analyst for each one of 20 21 the Certificate Management Teams. Plan B was we'll 2.2 hire -- we have enough funding or authorization to hire 23 five, and we'll try to have those five analysts service 24 a couple of these CMTs. That was the plan, but they

would be -- they would still sit out at Dulles and sit
 there.

DR. ELLINGSTAD: Okay. 3 4 MR. YOUNGBLUT: So, it certainly wasn't an 5 ideal situation because they would never really intimately get involved with that particular CMT or 6 7 that air carrier. DR. ELLINGSTAD: All right. Have any of 8 those analysts, any of the analysts that have been a 9 10 part of the program to date, had any specific involvement with Alaska Airlines? 11 12 MR. YOUNGBLUT: Not to my knowledge, sir. DR. ELLINGSTAD: In terms of assessing any of 13 the program's data, etc., that pertained to its 14 15 functions?

16 MR. YOUNGBLUT: They did produce a data 17 package that was used by the Certificate Management 18 Team for their initial planning of developing their 19 Comprehensive Surveillance Plan.

20 DR. ELLINGSTAD: Okay. What are the 21 qualifications of an analyst?

22 MR. YOUNGBLUT: That's really not in my 23 field, sir. I can't answer that.

24 DR. ELLINGSTAD: Are they statisticians? Are

they aero-engineers? What kind of background? Do you have any knowledge of what these -- where these people are coming from?

MR. YOUNGBLUT: They're operational research analysts, and I know the target was to try to get somebody with those qualifications, yet have some aviation background. So, we weren't bringing in just someone who knew how to crunch numbers real well, but that's as far as I can go. They are ORAs. They have that qualification.

DR. ELLINGSTAD: Okay. But you don't have any knowledge of the specific academic credentials that are required for these positions?

14 MR. YOUNGBLUT: No, sir.

DR. ELLINGSTAD: Okay. We'll clearly want to pursue that with the FAA. How about the data that these people analyze? Now, you've, I think, implied at least that the fundamental data collection that you're dealing with are your responses to the 20,000 questions. Is that the key -- the chief database upon which the analysis is based?

22 MR. YOUNGBLUT: That will certainly be a 23 primary information source.

24 DR. ELLINGSTAD: Okay. And most of the data

1 in that collection of responses to those 20,000

questions, is that essentially binary data that has to do with whether there's compliance on this or that or the other specification?

5 MR. YOUNGBLUT: It is binary data, but it 6 goes well beyond compliance. Any time there's a "no" 7 answer to one of those questions, they are required to 8 give us an explanation as to why that was a "no". 9 Also, we want to collect information. What was the 10 inspector action taken as a result of that "no", if 11 there was any action taken?

DR. ELLINGSTAD: Okay. But the data that the analysts operate on do not include, I understand, the -- any specific kinds of performance results, you know, from the application of some inspection procedure, some end play check or whatever, you know, those kinds of activities. Is that a correct understanding?

18 MR. YOUNGBLUT: I think you're correct there.19 We're looking at both compliance and at process.

20 DR. ELLINGSTAD: What is the relationship of 21 the ATOS activity with respect to Alaska's Certificate 22 Management Team assisted or not by any of the analysts 23 that you have in the program with respect to Alaska's 24 reliability program?

1 MR. YOUNGBLUT: Could you repeat that again? DR. ELLINGSTAD: Well, Alaska, we heard 2 yesterday from -- some time this week from Mr. 3 McCartney about -- the manager of Alaska Airlines 4 5 Reliability Program, about the kinds of data that were 6 tracked and the responsibilities that that activity had 7 for measuring the performance of their maintenance 8 systems, tracking component removals, maintaining a 9 database that would be consulted with respect to 10 decisions like changing lubrication intervals. 11 MR. YOUNGBLUT: Correct. 12 DR. ELLINGSTAD: So, there is that activity that was ostensibly going on at Alaska. 13 What interaction is there with that activity, what 14 15 surveillance of that activity, what certification or inspection of that activity is there out of this ATOS 16 17 System? MR. YOUNGBLUT: That's in fact one of the 18 elements that we look at in ATOS, that air carrier's 19 reliability program. 20 21 DR. ELLINGSTAD: Okay. And what do you look 2.2 at with respect to that? Is it a check as to whether 23 they have it or not? 24 It's a lot more than that. MR. YOUNGBLUT:

Of course, it's a check to do they have it, but then we go on, and we go through to ensure that safety is built into that, and we use those same six safety attributes when we look at that reliability program.

5 We look at who's responsible for that program 6 within, and I'll use Alaska Airlines, who is that 7 person? Is that documented? Does everyone know who is 8 responsible? Then we go back, and we look at who has 9 the authority to change that reliability program at 10 Alaska Airlines. Is that documented, so everyone knows 11 who has the authority to change that?

12 Then we go look at what kind of controls13 within Alaska's Reliability Program are in place?

DR. ELLINGSTAD: Would you expect that you would look with some degree of specificity at what kind of data that program was collecting? What sort of indicators that they might have had that there were potential component failures looming on the horizon? MR. YOUNGBLUT: Whenever we do any of these

inspections, we always -- part of that is always a records check, some type of a records check to see, you know, what is their recordkeeping system? Is that functioning well? Almost every process has some type of a recordkeeping system. So, that's kind of how --

that's what we would do when we sample. We want to go
 out there and see what kind of records are they
 keeping.

4 DR. ELLINGSTAD: Would you expect that that 5 process with respect to Alaska Airlines would have been 6 conducted in a more thorough way had there been an 7 analyst assigned?

8 MR. YOUNGBLUT: I don't really think that 9 would matter, if the analyst was there at this point. 10 Maybe further down the road, it would because the 11 analyst might see I need this other piece of data, and 12 I'm not getting this piece of data to paint the picture 13 that I'm trying to work for.

DR. ELLINGSTAD: Well, what I'm trying to get 14 15 at is, is there something in the ATOS System, the way that it is theoretically designed, and if it were fully 16 17 staffed and fully funded and operating in the way that 18 it theoretically was expected to operate? Is there some reason to believe that there would be a great --19 would have been a greater sensitivity to detecting 20 21 problems with the jackscrews through the end play tests or whatever other indicators that there were? Would 2.2 23 ATOS have been sensitive or should ATOS have been sensitive to that? 24

1 MR. YOUNGBLUT: It's hard to get down to a 2 specific instance, a specific example, as you've 3 mentioned.

DR. ELLINGSTAD: I'm not trying to suggest, you know, that we might have identified this particular aircraft. What I'm asking is would we have identified a deficiency in some kind of a reliability program that may have been more sensitive to measuring the kinds of things that are important for safety?

MR. YOUNGBLUT: I think there's a high likelihood within ATOS that we would have identified deficiencies within that air carrier's reliability program, and that in turn kind of snowballs the effect because everything -- the process is only as good as the system is built and the system is operated.

16 DR. ELLINGSTAD: Okay. You're saying that 17 that -- it would have been better had it only been 18 fully staffed?

MR. YOUNGBLUT: I'm saying if that safety attribute inspection was conducted, there's probably a good likelihood that we might have found some areas of concern in that reliability program, and we would have addressed those, and that's not -- we wouldn't really need an analyst to do that at this point because we

identified some problems, and we would follow through
 on those problems, even without that analyst in place.

3 DR. ELLINGSTAD: Okay. Is the whole -- is 4 the use of the analysts that is contemplated by this 5 system designed and specified, you know, for the whole 6 program? You've described a variety of things that 7 this individual at Southwest is doing, and you 8 mentioned that he's using accident and incident and all 9 sorts of other data.

10 Is there a systemwide analytical program or 11 are these -- do you just hire some people and turn them 12 loose to do the kinds of data crunching that they deem 13 appropriate in individual situations?

How formalized is the -- is your analytical program?

MR. YOUNGBLUT: That process is -- really 16 17 needs to still be built, that module, that seventh 18 module, that analysis module. Since we have not had the analysts, we really haven't done any significant 19 work in there at all. We've been really waiting for 20 21 those analysts to come on board, and through a collaborative effort, working with those Headquarters 2.2 23 analysts and working with those -- with their principal inspectors, start to develop those processes, but they 24

1 are not formalized at all right now.

DR. ELLINGSTAD: It really isn't specified 2 3 what it is that the analysts are supposed to analyze or 4 _ _ 5 MR. YOUNGBLUT: Well, we have -- we have some 6 -- and I'd say first generation-type processes built, 7 you know. We think the analysts will do this. We'll -- but we don't have any specific processes built yet. 8 We really need to get those analysts on board. 9 10 This is very similar to what we -- we plan on 11 doing something very similar to what we did with that 12 Data Evaluation Module. We never had a data evaluation program manager before either. We really -- we knew 13 that we wanted to have better quality data, be concise, 14 15 clear, even correct spelling and punctuation, but we never had that before. 16 17 So, when we actually hired those DEPMs from our inspector ranks, they are inspectors, and we 18 19 brought that group --20 DR. ELLINGSTAD: Excuse me. Could you help 21 me with that last acronym? D-E-P-M? 2.2 MR. YOUNGBLUT: Data Evaluation Program 23 Manager. I'm sorry. 24 DR. ELLINGSTAD: Okay. And the data

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1 evaluation program managers are transformed inspectors? MR. YOUNGBLUT: That's right. 2 That's 3 correct. And the way we actually put that -- those processes together were a couple of my people and some 4 5 other subject matter experts, together with some of our 6 principals, they worked as a group to develop that 7 process. We knew the types of data that we had coming 8 in.

9 Now, how do we develop data quality guidelines, and how would each one of these 10 11 surveillance reports be reviewed? So, they actually 12 develop that process and that collaborative mode, and what we're hoping to do now that we're going to be able 13 -- that we're hiring the analysts, is to work something 14 15 similar to that, that we -- it's a training thing for all 10 analysts, plus they'll be involved in building 16 17 the process.

DR. ELLINGSTAD: Okay. I don't mean to belabor the point of the specifications of the analysts, but who is it that's hiring the analysts? MR. YOUNGBLUT: Those are -- actually, the selection process is being done at each one of the Certificate Management Teams, although one of the national analysts that we have here in Washington is

assisting that group in that interview process and
 developing that whole hiring process.

3 DR. ELLINGSTAD: Who's built the PDs for 4 those?

5 MR. YOUNGBLUT: The PDs actually were built 6 about two years ago, and they were built by a 7 collaborative group of analysts that we already had and 8 other Headquarters individuals.

9 DR. ELLINGSTAD: Okay. Thank you.

MR. HAMMERSCHMIDT:

10

11 Ellingstad. Let me ask a question. Mr. Berman, do you 12 have a question? Hold on a minute. I want to ask more 13 of a follow-up question to Dr. Ellingstad's questions.

Thank you, Dr.

But concerning this so-called "20,000 question process", what question in that 20,000 batch of questions would relate directly to the maintenance of the horizontal stabilizer trim system on MD-80 series aircraft at Alaska Airlines?

MR. YOUNGBLUT: There isn't that one questionthere in ATOS, because we look at the systems, --

21 MR. HAMMERSCHMIDT: Right.

22 MR. YOUNGBLUT: -- and you can see the 88 23 elements.

24 MR. HAMMERSCHMIDT: But, I mean, I'm not only

three questions, six questions would relate? I mean, 2 are there any specific questions that would home right 3 4 in on that particular system? 5 MR. YOUNGBLUT: Even our elements that we 6 have right now, our 88 elements, are really above that 7 level. 8 MR. HAMMERSCHMIDT: Okay. Okay. Thank you. Mr. Berman? 9 10 MR. BERMAN: Thank you, sir. Mr. Youngblut, 11 I understand that Congress mandated a status report on 12 ATOS that was due last August. Has that report been issued? 13 MR. YOUNGBLUT: To the best of my knowledge, 14 15 it hasn't been yet. It's -- it left my office an awful long time ago, but it's in the coordination process, I 16 17 quess. MR. BERMAN: When did it leave your office? 18 19 MR. YOUNGBLUT: At least three months ago. MR. BERMAN: Okay. Do you have any idea 20 21 what's the hold-up, besides just coordination? 2.2 MR. YOUNGBLUT: The best I can give you, it's 23 in coordination, and we do check on it, but, you know, we're not a driver to make sure it gets finally signed 24

talking about one question, but what -- one question,

1

1 and completed.

2 MR. BERMAN: Okay. Thank you. Thank you, Mr. Berman. 3 MR. HAMMERSCHMIDT: 4 Let's see. Mr. Rodriguez, do you have some additional 5 questions? 6 MR. RODRIGUEZ: Just one, sir. It may be 7 minor. Mr. Youngblut, I questioned you earlier, and apparently you picked up some information over the 8 9 lunch hour. We're now talking about seven operations 10 research analysts at Dulles. Is that what I understand 11 you to say? 12 MR. YOUNGBLUT: That's correct. We had two Actually, we had three. We got -- hired five 13 there. 14 more, and one has just left last week. 15 MR. RODRIGUEZ: So, you have six there? MR. YOUNGBLUT: We have seven. We had three 16 17 -- I'm sorry. We had three. One of those individuals just left, and then we hired five more. I think that's 18 19 seven. 20 MR. RODRIGUEZ: And you just testified to Dr. Ellingstad that the hiring of the operations -- I'm 21 2.2 sorry -- the DEPMs are to be done at the specific CMTs, is that correct? 23 24 MR. YOUNGBLUT: The data evaluation program

1 managers are already on board and hired.

MR. RODRIGUEZ: What's the difference between 2 -- this is the question I asked earlier, and I guess I 3 4 didn't express it well. What's the difference between 5 the DEPM and an operational analyst? 6 MR. YOUNGBLUT: A huge difference. 7 MR. RODRIGUEZ: Okay. I'll take your word 8 for it. Is there any additional operational analysts 9 conceived to be assigned to the CMTs as a dedicated 10 analyst? MR. YOUNGBLUT: Not at this time. 11 12 MR. RODRIGUEZ: Thank you. MR. HAMMERSCHMIDT: Thank you, Mr. Rodriguez. 13 Are there any other questions for this witness? 14 15 (No response) MR. HAMMERSCHMIDT: Mr. Youngblut, we want to 16 17 thank you for your participation in this public hearing 18 and for your cooperation with our investigation. Have you already provided our hearing officer 19 with the slides of your presentation this morning? 20 MR. YOUNGBLUT: Yes, I have. 21 2.2 MR. HAMMERSCHMIDT: You have already -- oh, 23 very good. And, Mr. Rodriguez, just for everyone's benefit, the slides of the ATOS System, that will be 24

1 new Exhibit 2-Romeo, 2-R, is that correct? 2 MR. RODRIGUEZ: Yes, sir. MR. HAMMERSCHMIDT: All right. 3 That ATOS 4 System Description will be Exhibit 2-R. 5 (The document referred to was marked for identification as 6 7 Exhibit Number 2-R and was received in evidence.) 8 MR. RODRIGUEZ: Yes, sir. I labeled it ATOS 9 10 Program Briefing Graphics. 11 MR. HAMMERSCHMIDT: Excellent. Mr. 12 Youngblut, you may stand down. We thank you again. MR. YOUNGBLUT: I'd just like to say one 13 word, if I could? 14 15 MR. HAMMERSCHMIDT: Please. MR. YOUNGBLUT: We still have a lot of work 16 17 to do in ATOS. It's a great system, but we still have a lot of work to do, and that's why it's a continuing -18 - we have this continuous improvement organization, and 19 I have 12 people that work for me, and they are the 20 21 most dedicated FAA people that I've ever met. They work -- I mean, they put their heart and soul into what 2.2 23 they're doing. They work a ton of extra hours, and I just wanted to put that in the public record. 24

1 MR. HAMMERSCHMIDT: Very good. We thank you 2 for that.

3 (Whereupon, the witness was excused.)
4 MR. HAMMERSCHMIDT: The next witness is Mr.
5 Bill Whitaker. Would Mr. Whitaker please proceed
6 towards the witness table? We'll give Mr. Whitaker
7 plenty of time to get situated.

8 Speaking of exhibits and speaking of our 9 administrative side of the house here at the hearing, I 10 noticed Mrs. Eunice Bellinger was assisting Mr. 11 Whitaker, and I want to certainly acknowledge all of 12 her very able assistance throughout the hearing.

13 She's been here along with Mrs. Carolyn 14 Dargan, and without them, we would be lost in terms of 15 -- especially in terms of the paperwork flow. So, we 16 thank you, Ms. Bellinger, and wish to recognize that 17 for the record.

- 18 Whereupon,
- BILL WHITAKER
 having been first duly affirmed, was called as a
 witness herein and was examined and testified as
 follows:

23 MR. RODRIGUEZ: Please be seated, sir.
24 Interview of Bill Whitaker

1 MR. RODRIGUEZ: And would you give us your full name, please? 2 William George Whitaker. 3 MR. WHITAKER: 4 MR. RODRIGUEZ: And your occupation? 5 MR. WHITAKER: Principal Maintenance 6 Inspector for Alaska Airlines. 7 MR. RODRIGUEZ: And your business address? MR. WHITAKER: 4800 South 188th Street, 8 SEATAC, Washington 98188. 9 10 MR. RODRIGUEZ: And would you briefly 11 describe for us your aviation background? I started in 1971 in the Air 12 MR. WHITAKER: Force Reserves. I served in the Reserves for 13 14 approximately three years, and I was hired as a civil 15 service employee then for the Reserves. I worked out at McCord Air Force Base on C-16 17 141s and C-130s for approximately 15 years, eight of which, I was a supervisor. I left McCord, went to 18 Alaska Airlines in 1989, line mechanic, was later 19 promoted to a supervisor. 20 I left there in 1991 and joined the FAA up 21 2.2 the Anchorage FSDO, and approximately a year later, I 23 transferred down to Seattle, and I spent time as a geographic inspector there. I was in the Alaska 24

1 Airlines Certificate Management Unit as an MD-80 partial program manager, and then I went to the 2 Aircraft Evaluation Group for two years, I think in 3 4 early February of 1998, and then January 16th of 2000, 5 I took the job as a principal maintenance inspector back at the Alaska Airlines Certificate Office. 6 7 MR. RODRIGUEZ: All right, sir. And as a 8 partial program manager, you had what responsibility? 9 MR. WHITAKER: I was responsible for the 10 maintenance programs on the MD-80 fleet at Alaska. 11 MR. RODRIGUEZ: And as a principal 12 maintenance inspector, you no longer do that, is that 13 correct? MR. WHITAKER: No longer have --14 15 MR. RODRIGUEZ: You don't have the -- you're not filling that position as well? 16 17 MR. WHITAKER: Oh, no. No. We have a new 18 MD-80 program manager now. MR. RODRIGUEZ: Yes. Dr. Brenner will 19 question the witness, Mr. Chairman. 20 DR. BRENNER: Good afternoon, Mr. Whitaker. 21 2.2 MR. WHITAKER: Good morning, sir. 23 DR. BRENNER: We've been talking about ATOS, and we'd appreciate your views as an inspector who 24

1 works with ATOS. Do you like the program?

2	MR. WHITAKER: I see a lot of good things in
3	ATOS. It's a little bit tough for me to qualify myself
4	as being an expert on ATOS, though, because I came
5	straight out of ATOS training in February of this year,
6	and when I finally got back to the office, that was
7	after the accident had happened, I pretty much had to
8	hit the ground running, and, unfortunately, the ground
9	was moving a little faster than the office could move.
10	So, I haven't had the luxury of really
11	learning and experiencing ATOS, but I do see a lot of
12	good things in it.
13	DR. BRENNER: What are some of the good
14	things you see in it?
15	MR. WHITAKER: Well, I particularly like the
16	safety attribute inspections, the SAIs. I think it's
17	something we've long needed in the FAA for a structure,
18	a standard of what we're looking at with the control
19	measures that they have in place in the SAI. It gives
20	us the basis that we need and a structured laid-out set
21	of instructions that we can use, and they're all good
22	ones. They all get right to the point and help you get
23	to the federal regulations as the main part.
24	DR. BRENNER: Are there things that you do

1 not like about ATOS?

2 MR. WHITAKER: Not being a computer person, I definitely have problems with the programming. It 3 4 might just be me, but I've had quite a bit of trouble 5 with that, and the fact that it's time-consuming -- if 6 I see a problem -- I'm kind of a black and white person 7 myself, as I said earlier. If I see a problem, I like to have the 8 9 federal regulations in my hand and go fix it in 10 accordance with the regulations and not have to go back 11 to the computer and reanalyze it and find out what I 12 should have to do. That part of it, I'm not real crazy about that. 13 DR. BRENNER: And I understand that since the 14 15 accident, your office has implemented an augmented surveillance plan that combines ATOS with the 16 17 surveillance under the earlier program, PTRS, is that 18 right? 19 MR. WHITAKER: That's correct. DR. BRENNER: Why did the office do that? 20 MR. WHITAKER: Well, when I first came into 21 2.2 the office -- actually when the accident happened, I 23 was in training. So, I came to work, went off to training and came back after the accident had happened. 24

1 With the amount of people we had for staffing in the CMO, we were a CMS back then, a Certificate 2 Management Section, we were still part of the FSDO, 3 Flight Standards District Office, back in that time 4 5 frame, it was -- we were just inundated with 6 information requests, histories, and to be relying on 7 the computer and taking those types of -- the time it takes to do SAIs, EPIs, we just couldn't get to it with 8 9 all the other work we had going on.

10 So, we had to have some surveillance. So, we 11 asked and got permission to ask the other FSDOs 12 throughout the system where Alaska flies if they could provide extra surveillance for us out there, and we 13 also asked them to please, you know, if they see a 14 15 problem, call. It was important that we get the information right away and get it firsthand from the 16 17 inspectors. So, it's been a tremendous help. 18 DR. BRENNER: What percent of your surveillance is PTRS, and what percent's ATOS? 19 20 MR. WHITAKER: I've never looked at 21 percentages, but I'd say it's -- augmented surveillance 2.2 is probably about 40 percent of our surveillance help. 23 DR. BRENNER: And how do you integrate information from the two programs? Do the computers 24

1 talk to each other?

2	MR. WHITAKER: No. I have my assistant
3	that I have now, I have him pull up at least weekly all
4	the PTRS entries and highlight anything that puts up a
5	flag for him, and he coordinates with me on that, and
6	then I can get with the prospective respective
7	inspectors in the field, and that's basically how we do
8	that, is we just keep an eye on what comments are
9	coming in, knowing that if there is anything that
10	really needs to be attended to, they will call me, and
11	they've been good about doing that.
12	DR. BRENNER: Would you recommend this
13	augmented surveillance to other certificates?
14	MR. WHITAKER: Hopefully there's no other
15	certificate-holding offices out there operating under
16	the conditions we're operating under right now, but,
17	yes, I can see some advantage to it.
18	DR. BRENNER: What's that? What is that?
19	MR. WHITAKER: Getting the firsthand
20	information right away, and the problem with it was
21	that these other offices are not ATOS-trained and
22	qualified. So, that's why we had to get some kind of
23	special permission to do this, because the way the
24	rules are written now, that is a requirement to do

inspections under the ATOS Program as they have to have
 the FAA ATOS training, plus the air carrier-specific
 training, which we provide in our office for ATOS
 inspectors.

5 So, since they -- since these other offices 6 don't have that training, that's why we had to go with 7 some special permission to do that, but it was 8 necessary because of the workloads we had in our 9 office, and I'd like to add to that. We were using our 10 CMT members to supplement our office as well.

11 So, we had to pull them from out of the 12 field, out of their geographic locations, and that we 13 were using them pretty regularly in Seattle with us and 14 are now in Oakland.

DR. BRENNER: We were talking with the last witness about the first year of the Alaska Airlines Certificate ATOS Program. Can you -- do you know -can you tell us about that, what happened, prior to the accident?

20 MR. WHITAKER: Prior to the accident, no, I 21 had no involvement in that. I was over in the Aircraft 22 Evaluation Group at that time.

23 DR. BRENNER: Okay. As PMI, were you aware 24 that Alaska Airlines had changed its MD-80 lubrication

1 program to AeroShell 33?

2	MR. WHITAKER: As PMI? When I was no.
3	DR. BRENNER: Yes.
4	MR. WHITAKER: No.
5	DR. BRENNER: Should the PMI be advised of
6	this?
7	MR. WHITAKER: Yes.
8	DR. BRENNER: Would you have agreed to the
9	change?
10	MR. WHITAKER: Under Part 43 of the federal
11	regulations, Paragraph A says that they need to follow
12	the practices, standards and techniques and use the
13	manufacturer's instructions for continued
14	airworthiness.
15	Paragraph C of that same regulation, though,
16	does say that if they one of the it doesn't say
17	privilege, but that's how we consider it. With the 121
18	operating certificate and operations specifications,
19	that they have the authority, according to the
20	regulation, to make those kinds of changes themselves.
21	In this particular case, this may come to a
22	certification issue. So, if there would have been an
23	approval required, that would have probably come from
24	the Certificate Office rather than at our level at the

1 CMO.

2	DR. BRENNER: Thank you. Yesterday, Mr.
3	Fowler spoke about discussions between the FAA and the
4	airline that took place in the March time frame after
5	the accident concerning a proposed SAT audit that the
6	two would carry out jointly under the ATOS Program.
7	What was your involvement in these
8	discussions?
9	MR. WHITAKER: I had no involvement in the
10	first discussions.
11	DR. BRENNER: And subsequently, did you?
12	MR. WHITAKER: Yes. There was a meeting
13	after the original discussions that I had attended, and
14	we discussed it at that time with Mr. Fowler and Mr.
15	Trimberger, and I think Mr. Weaver was there, too.
16	DR. BRENNER: Was the discussion that the SAT
17	audit might include self-disclosure to preclude
18	enforcement action?
19	MR. WHITAKER: Yes, there was.
20	DR. BRENNER: What was the discussion? Where
21	did it come from?
22	MR. WHITAKER: I'm not sure how the
23	discussion actually came up, but Mr. Hill was
24	discussing with Mr. Fowler that being they were going

1 to be providing people to assist us in this SAT, that the findings would be eligible to be considered self-2 disclosures. 3 DR. BRENNER: Did you support the idea of 4 5 self-disclosure? 6 MR. WHITAKER: No, I didn't. I spoke up at 7 the meeting, and I couldn't agree with that. DR. BRENNER: And why is that? 8 MR. WHITAKER: Well, first off, I didn't 9 10 quite understand what a SAT was. Actually, I had --11 even though I had come out of -- just come out of ATOS 12 training, I didn't know what a SAT was, but I couldn't find a way to define where you would draw the line, 13 what the operator discovered and what we discovered, if 14 15 we're working as a team. I just -- I couldn't see where it would apply 16 17 to a self-disclosure, not the criteria required in the advisory circular. 18 DR. BRENNER: Okay. I believe you've spoken 19 with -- in an interview before, and if I understand, 20 your first involvement of this would have taken place 21 after the initial discussions that Mr. Fowler 2.2 23 described, and they took place within the FAA, is that correct? 24

MR. WHITAKER: Are you talking about the
 first discussions --

3 DR. BRENNER: The first discussions on the 4 SAT. Could you just describe the first time you heard 5 about this process, just briefly?

The first time I heard about 6 MR. WHITAKER: 7 it, Mr. Hoy, who was our unit supervisor at that time, 8 approached me and said that our attorney, Mr. Peter 9 Leyland, wasn't going to sign this memorandum of 10 agreement, and my first question or my first words 11 were, "What kind of agreement?" I'm not sure if that's 12 exactly what he called it, some kind of an agreement, but -- and he said -- that's when I was made aware that 13 there had been a meeting with Alaska Airlines a couple 14 15 days prior to that, and, so, that was my first knowledge of it. 16

17 DR. BRENNER: And what was your reaction? 18 MR. WHITAKER: I was pretty upset, and I actually -- first, I asked why I wasn't included in the 19 meeting, and he explained to me that, well, I probably 20 should have been, but I said I felt I was -- my 21 position was being undermined, and that I'm the one 2.2 23 with the responsibility of this maintenance program at Alaska Airlines, and maybe I was the wrong person for 24

1 the job.

DR. BRENNER: Did you feel that some sort of 2 3 inspection or audit would have been appropriate at that 4 time? MR. WHITAKER: Yes, I did. 5 6 DR. BRENNER: And what format did you prefer? 7 MR. WHITAKER: We had originally planned, at 8 least the way I was told, was to plan an in-depth 9 inspection, put a team together and try and find out 10 what problems, if any, existed, and where I thought we 11 should go first, and, of course, there was other 12 investigations going on. So, I was going to try and zero in on if 13 there was a cause or if there was a problem, what was 14 15 it, where was it, didn't really have a clue, just a lot of suggestions that there were problems. 16 17 DR. BRENNER: What happened then? MR. WHITAKER: I put together a team in the 18 office, along with the assistance from the -- our 19 division, the specialists over there, and began trying 20 to -- we kind of like locked ourselves in the 21 conference room, and on the blackboard started listing 2.2 23 areas, anything that maybe was a red flag to anybody in the past, anything that could indicate trouble, and 24

1 specifically on the heavy check area.

2	We felt we finally decided that was where
3	we needed to zero in on. So, it took us a good day
4	just to brainstorm and get the information up on the
5	blackboard and eliminate it down to what we thought
6	would be good comprehensive areas to go to.
7	Then we were part of the way through this,
8	I'm not sure Mr. Hoy told me we're going to call
9	this a SAT inspection. I said, "Fine. I don't care
10	what we call it. I just would like to get going on
11	it", and then subsequently was when the meetings were.
12	During that time frame, there was talk that
13	maybe there had been some kind of an agreement at
14	another operator somewhere, but our regional specialist
15	checked out as much as he could on that and said he
16	couldn't find any evidence of anything like that.
17	So, we had dropped the subject there. It was
18	done as far as we were concerned.
19	DR. BRENNER: I understand you participated
20	in the National Safety Inspection Team that inspected
21	Alaska Airlines subsequent to this period, is that
22	right?
23	MR. WHITAKER: Yes, I did.
24	DR. BRENNER: What did you learn about the

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1 maintenance program of the carrier?

MR. WHITAKER: The approach we took on this 2 inspection was, first, for us -- actually, it was kind 3 of our plan anyway, after it became a national safety 4 5 inspection. We went through the General Maintenance Manual, tried to figure out all the procedures for 6 7 everything that involved the heavy check, from the day an airplane is -- the first day of the planning stage 8 of the heavy check, until the day the airworthiness 9 10 release is signed, including up to how operational 11 control would be given back to Operations. 12 We went through each step, planning first, and then how it was turned over to Production Control, 13 how the actual heavy check was accomplished, how an 14 15 airworthiness release was accomplished, and how the operational control was, and we tried to read this, 16 17 this was amongst us in the CMT at the time, so we could understand it, and we were comparing it strictly with 18 the regulations and the requirements of the 19

Ultimately, it became -- that was canceled. It was going to be a national safety inspection now, and that Washington was going to lead it. So, we -- I canceled it and selected people from around the country

regulations.

20

that I knew were good inspectors, and I wanted on the
 team.

3 So, I had -- I already had hotels and 4 everything. So, I had to cancel all of that, all the 5 logistics of it, and then ultimately, AFS-40 sent Mr. 6 Ed Hugg out to lead the team. So, that's the progress 7 there.

8 DR. BRENNER: And what were your conclusions 9 about the maintenance program as a result of the 10 special inspection?

11 MR. WHITAKER: What we found when we got --12 you know, after going through the General Maintenance 13 Manual and that, we figured we had pretty well 14 identified weak areas.

15 When we got down to Oakland, myself, Ted Hutton, our regional specialist, and one of the other 16 17 inspectors, Corky Lukes, in our office, we went to 18 Oakland, the rest of the team was up in Seattle, virtually doing the same inspection we were doing down 19 in Oakland, but we spent probably the first half a day, 20 maybe a little bit longer than that, with each 21 2.2 respective manager of the Planning, Production Control, 23 the foremen on the floor, asked them to walk through their -- each process with us and show us how they 24

1 actually accomplished their respective sections.

2	Then we asked to show where these things were
3	written down, as there are procedures in the manuals
4	required by 121, 135, and pretty much, they were non-
5	existent. I mean, there were procedures in there. I
6	don't want to make it sound like it was totally
7	oblivious, but a lot of policy in the General
8	Maintenance Manual and not a lot of procedures. A lot
9	of forms that were used.
10	The good thing we found was that, you know,
11	they had good employees that had been around for a long
12	time. They knew their job. They knew what needed to
13	be done, but nothing was written down as it was
14	actually being accomplished out there.
15	So, there was a lot of room for error, and if
16	somebody was to leave the company or be sick, they took
17	the knowledge with them on how the processes worked and
18	where the forms came from. A lot of good forms, a lot
19	of good processes, but none of it was written down.
20	DR. BRENNER: All right. A senior FAA
21	manager indicated in an interview that his reaction to
22	the special inspection report was that it revealed to
23	him that there were serious difficulties in the
24	airline's maintenance program that the Certificate

1 Management Office had failed to detect before the accident. Would you agree with this assessment? 2 MR. WHITAKER: Yeah. I quess I would have to 3 4 agree. I don't know if the word "failed" to identify 5 would be right, but, yeah, I guess I'd have to agree with it. 6 7 DR. BRENNER: And when you began, around the time of the accident, were any of the managers over 8 9 your section, either in the regional office or the 10 district office, did any of them come from a 11 maintenance background? 12 MR. WHITAKER: None that I know of, no. DR. BRENNER: Does it help you in your work 13 14 if you have managers with a maintenance background? 15 MR. WHITAKER: I think so, yes. It would 16 help a lot. 17 DR. BRENNER: And in what ways? MR. WHITAKER: One big help at this 18 particular time would be when questions come from 19 wherever they come from, we were -- like I said, we 20 have this never-ending pipeline of information requests 21 2.2 come down. It would be nice to have these things --23 these questions fielded somewhere above us, to keep us from having to answer them, and if we had somebody with 24

1 a maintenance background in there, it would be a tremendous help to us down there, and the other thing 2 is, we spend a lot of time educating, I guess, is about 3 the only word I can think of, you know, what a 4 5 maintenance program is, and what it takes. 6 There's a lot of times that unless you're 7 part of the maintenance world, you just don't quite understand how involved it is, and how much there is to 8 9 it. 10 DR. BRENNER: Around the time of the 11 accident, were there any managers over the Certificate 12 Management Section that had a background -- an airline background? 13 MR. WHITAKER: Not -- I don't believe so. 14 15 DR. BRENNER: Okay. Thank you very much, Mr. Whitaker. That completes my questions, Mr. Chairman. 16 17 MR. HAMMERSCHMIDT: Thank you, Dr. Brenner. Are there other questions from the Technical Panel? 18 19 (No response) MR. HAMMERSCHMIDT: Very well. Let's start 20 the questioning from the Parties to the public hearing. 21 As we did earlier, let's begin with Alaska Airlines. 2.2 23 Any questions from Alaska Airlines at this time? 24 CAPTAIN FINAN: No questions, Mr. Chairman.

1 MR. HAMMERSCHMIDT: Thank you, Captain Finan. 2 Boeing? 3 MR. HINDERBERGER: No questions, Mr. 4 Chairman. 5 MR. HAMMERSCHMIDT: Thank you, Mr. 6 Hinderberger. Aircraft Mechanics Fraternal 7 Association? MR. PATRICK: No guestions, Mr. Chairman. 8 9 MR. HAMMERSCHMIDT: Thank you, Mr. Patrick. 10 The Air Line Pilots Association? CAPTAIN WOLF: Thank you, sir. Thank you, 11 12 Mr. Whitaker. Just a few questions here. As Mr. Youngblut indicated earlier this 13 14 morning about the ATOS Program, it was implemented at 15 Alaska in February of '99. When did you and/or your staff complete ATOS training yourself? 16 17 MR. WHITAKER: I completed it in February of this year. The PAI had completed it in the early --18 the first class they had with the class, and then the 19 seminar down in Dallas, and prior to ATOS beginning, 20 and let's see. The assistant principal at that time, 21 2.2 he had also attended it in 1998, I guess it was, in 23 Dallas. CAPTAIN WOLF: Have you had much interface 24

1 with your company, with our company counterparts as far as sharing the ATOS philosophy or giving them 2 information, information concerning the ATOS Program? 3 MR. WHITAKER: Yeah. 4 On several different 5 levels. Actually, the ATOS Program itself, and I know 6 that Alaska did bring Sandia Labs in to give training 7 at Alaska Airlines, to their management, but as a result of the findings we had during the NSI inspection 8 and subsequent inspections, part of Alaska's agreement 9 10 to their plan of action to fix these problems, they're 11 rewriting their complete General Maintenance Manual to 12 -- it's going to be called a GPM, when it's accomplished, but it is written in the format of the 13 14 SAI, same with their CAS Program. 15 Everything is -- everything that I have seen is right in line with ATOS. So, I've done guite a bit 16 17 of work at trying to help them with points of contact, to get ahold of forms and formats, and a lot of 18

19 interface with ATOS.

20 CAPTAIN WOLF: I know you've just been the 21 PMI for a short time at Alaska, relatively speaking. 22 Are you aware of or do you know if the ATOS System has 23 identified any areas of risks or concern at Alaska, and 24 if there was a problem that arose from that, was the

MR. WHITAKER: Actually, yes. There was an 3 EPI accomplished that did -- by one of our CMT members 4 5 down in Portland and has identified a personal oxygen 6 bottle issue that is currently -- I think the fix, 7 hopefully, is in place by now, but it did identify a problem on that. It was -- it did direct them right 8 9 into finding the problems. 10 CAPTAIN WOLF: So, in that particular incidence, incident, then it did work? 11 12 MR. WHITAKER: Yeah. It has proven to find -- you know, in certain areas, it will find things. 13 CAPTAIN WOLF: Good. Are the safety 14 15 attributes that you look for one airline the same for another airline? 16 17 MR. WHITAKER: As far as I know, they're all 18 the same, yes. CAPTAIN WOLF: What criteria do you use to 19 determine those attributes then? 20 MR. WHITAKER: I'm not sure if I understand 21 2.2 what you mean. Well, in other words, if 23 CAPTAIN WOLF: you're looking at the attributes between comparing it 24

ATOS Program able to identify it properly, and then the

appropriate steps being able to be taken?

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1 with several airlines or whatever, is there a set 2 standard or is it just something as an overall 3 philosophy that they're pretty close in line with one 4 another?

5 MR. WHITAKER: I think if what you mean is 6 are the safety attributes used, are they the same at 7 each airline, yes, they're all the same.

8 CAPTAIN WOLF: There were some questions that 9 were asked yesterday about unlicensed mechanics or that 10 type of area. What are the regulations regarding the 11 performance of maintenance by unlicensed mechanics?

12 MR. WHITAKER: They can apply for a repairman's certificate for an unlicensed mechanic, and 13 they need to work under the supervision of an air frame 14 15 and power plant mechanic or just an air frame or just a power plant. It really depends on the job they do, but 16 17 as far as the avionics people qo, you know, they can work under the repairman's certificates or under a 18 repairman. 19

20 There's quite a few variables in Part 6521 under that in the federal regulations.

22 CAPTAIN WOLF: Is there any particular 23 oversight that you or your office has done in 24 particular to make sure these requirements are met?

1 MR. WHITAKER: Yeah. Fortunately, Alaska Airlines employs very few people without A&P 2 certificates, and that's mainly in their Avionics 3 Department where they do have them. 4 5 CAPTAIN WOLF: Okay. Could you just briefly 6 define and describe what a CAS Program is? 7 MR. WHITAKER: Yeah. Continuing Analysis and Surveillance Program. I like to refer to it as the 8 airline's internal police department or their internal 9 10 FAA. Their function is to perform audits, to ensure 11 that programs and systems are working as the manuals 12 are written. They also have an analysis function in 13 there. Since Alaska Airlines does have an approved 14 reliability program, CAS and Reliability have pretty

reliability program, CAS and Reliability have pretty much worked hand-in-hand, and in this particular case, the analysis portion of the airplane is pretty much covered by the Reliability Program.

19 CAS's analysis role in this would be 20 analyzing, for instance, the Reliability Program to 21 make sure that it is doing its job as it's written in 22 the manuals. So, it's an internal -- it's the internal 23 FAA.

CAPTAIN WOLF: Okay. What was the status of

24

1 this program, the CAS Program, at Alaska when you
2 assumed the position of PMI in February of this year?

I found that there was a CAS 3 MR. WHITAKER: 4 Program in place, and they were performing audits but 5 not to the depth, and they were short-staffed. The 6 procedures were not very clear. The forms they used 7 weren't clear. There was no real follow-up after 8 findings, you know. It needs to have a way to follow 9 up, to make sure that the problem areas have been 10 fixed, and the system is working properly. It was 11 lacking in all of those areas.

12 CAPTAIN WOLF: What's the status of it now? 13 MR. WHITAKER: Now, they have completely 14 revamped the whole CAS Program. They've, I believe, 15 more than tripled the size of their staffing now. They 16 have a director. It's a pretty elaborate system now, 17 and again it's all in the formatted right after ATOS 18 and the SAIS.

19 In fact, Alaska has -- where there are no 20 SAIs that may not cover a specific area, Alaska's made 21 their own generic ASI, they call it an ASAI, and it's 22 -- there's about three volumes of them that they have 23 now. They're all computer-generated, but they did 24 print a hard copy, so we have access to what they're

using. But virtually the ATOS System is what they're
 using.

3 CAPTAIN WOLF: Hm-hmm. In your offices at 4 the FAA, are there any authorized positions currently 5 that are unfulfilled at this moment or are you guys 6 completely up to staff?

7 MR. WHITAKER: We're -- I think we have three 8 more to fill, and that -- one of them's clerical, one 9 supervisor, and one, I believe, operations inspector 10 left to hire.

11 CAPTAIN WOLF: Does this hamper your ability 12 to monitor the airline or to put an extra workload on 13 the people that are there since there are some 14 positions that are unfilled?

MR. WHITAKER: These direct positions that are open right now don't really affect our activity, at least on the maintenance side of the house.

18 CAPTAIN WOLF: When the emergency AD was 19 issued for the inspection of the MD-80 jackscrew, what 20 did you do to verify that the end play check and the 21 visual inspections were being performed properly? 22 MR. WHITAKER: Prior to the AD issuing, we 23 had one of the representatives from the Aircraft 24 Evaluation Group in Seattle actually go over and verify

1 that. I wasn't even in the position yet when that AD was -- I don't believe I was even back from training 2 yet when the AD was issued. So, it wasn't until after 3 I got back that we started looking into that. 4 5 But there had been somebody from the AEG go 6 over there and verify an end play check. 7 CAPTAIN WOLF: Have you ever observed an end play check? 8 9 MR. WHITAKER: Yes, I have. 10 CAPTAIN WOLF: How about lubrication of the 11 jackscrew? 12 MR. WHITAKER: I have not personally watched a lubrication, but I believe it was my assistant 13 14 principal has early on in this. 15 CAPTAIN WOLF: Okay. Thank you very much. No further questions, sir. 16 17 MR. HAMMERSCHMIDT: Thank you, Captain Wolf. Moving next to the Federal Aviation Administration for 18 questions. 19 MR. DONNER: Thank you, sir. Just two 20 questions. Mr. Whitaker, do you presently have a 21 2.2 supervisor who has a maintenance background? MR. WHITAKER: Yes, we do. Our first-line 23 supervisor has got a maintenance background, 121 24

1 background as well.

2 MR. DONNER: Okay. And were you PMI at Alaska when the grease was changed? 3 MR. WHITAKER: No, I wasn't. I was partial 4 5 program manager at that time. 6 MR. DONNER: Thank you very much. 7 MR. HAMMERSCHMIDT: Thank you, Mr. Donner. Moving next to the Board of Inquiry for questions, 8 9 beginning with Mr. Berman. 10 MR. BERMAN: Thank you, sir. Just to pick up on the last question, as the partial program manager of 11 12 the MD-80 Program, would that have been your area that a task card change would have shown up for change of 13 14 grease? 15 MR. WHITAKER: Yes, it would have. MR. BERMAN: Okay. And you've no memory of 16 17 that? MR. WHITAKER: No, and we've looked through 18 all of our records trying to find -- we have no record 19 of anything on that. 20 MR. BERMAN: Do you -- did you at the time 21 archive those changes or at least the transmittal 2.2 23 sheets that said what changed? 24 MR. WHITAKER: Yes, we did.

1 MR. BERMAN: And, so, do you have that in 2 your records now?

3 MR. WHITAKER: Yeah. We do have the 4 transmittal sheet of the task card. It's difficult to 5 tell who actually did -- actually normal circumstances, 6 everybody in the office reviews the -- all the program 7 managers in Avionics and the principal always review 8 all changes like that.

9 This particular one, we've got a copy of the 10 transmittal sheet. There's some checkmarks on it to 11 show that -- what had been installed, and there's some 12 notes scribbled on there, but we can't determine whose 13 writing it was. It's -- there was a few other people 14 in the office at that time that are no longer there. 15 It looks as if it was one of those folks.

MR. BERMAN: Okay. Did you archive, when you're in that position, the supporting materials that went along with changes? Any supporting materials submitted by the airline?

20 MR. WHITAKER: Yes.

21 MR. BERMAN: Have you looked at the records 22 of that for the grease change?

23 MR. WHITAKER: Yes, we have. We have. We 24 have not -- we don't have any records on that. We do

1 now. Alaska's provided them to us, but we didn't have 2 any archived.

3 MR. BERMAN: So, did you routinely require
4 supporting documentation to accept a change?

5 MR. WHITAKER: Yes.

6 MR. BERMAN: An explanation of what happened 7 there?

8 MR. WHITAKER: No. From the looks, you know, 9 of what we've seen here, I'm not sure that we ever did 10 receive any information on that.

11 MR. BERMAN: So, you're operating under ATOS 12 and having some struggles, it sounds like, getting the 13 work programs done. You mentioned two things that 14 interested me about the ATOS process at Alaska.

15 One is you said the GMM was deficient in 16 terms of written procedures.

17 MR. WHITAKER: Correct.

18 MR. BERMAN: And the other was the CAS wasn't 19 to the proper depth. Were either of those programs 20 evaluated under the SAI?

21 MR. WHITAKER: I don't believe so.

22 MR. BERMAN: And those sound like fairly 23 major programs or parts of the maintenance program, the 24 GMM and the CAS. Any idea, were those scheduled to be

1 evaluated or were they planned and not done or what -2 how was that done?

3 MR. WHITAKER: Yeah. I'm sure, you know, they were planned, but they had not been done yet, at 4 5 least since I've been here. In the past, I don't know. 6 MR. BERMAN: Okay. It sounded like a greater 7 percentage of the SAIs were done than the EPIs. MR. WHITAKER: Yeah. 8 It was my understanding 9 originally, as Mr. Youngblut said, that the original 10 plan was to do all of the SAIs in the first year, but 11 after they found out how much work was involved, and 12 how long it took, that was not a feasible plan. 13 MR. BERMAN: Did the SAIs turn up anything 14 about Alaska's systems, any negative findings, as they 15 went through the ones that were completed? 16 MR. WHITAKER: I don't know. I wasn't there. In the past, I wasn't there. 17 That's true. Okay. We'll ask 18 MR. BERMAN: someone else. Thank you very much. 19 20 MR. WHITAKER: Hm-hmm. 21 MR. HAMMERSCHMIDT: Thank you, Mr. Berman. 2.2 Going next to Mr. Clark for questions. 23 MR. CLARK: Just going on, there's a list of monthly task card changes, Exhibit 11-I. You don't 24

1 necessarily need to get it out, but I assume you're 2 familiar with that?

3 MR. WHITAKER: Yeah. The transmittal sheet.
4 MR. CLARK: Right.

5 MR. WHITAKER: That's what we call it.

6 MR. CLARK: And that particular task card, 7 the 97.2974 there, are a large number of entries on 8 that, and there's checkmarks beside each one. What 9 would the checkmarks mean to you?

10 MR. WHITAKER: As the revisions were inserted 11 into the manuals, check them off so they can keep track 12 of where they're at.

MR. CLARK: Okay. So, somebody at FAA had the revisions, and you were updating your manuals, but the supporting paperwork, you're not sure what happened to or if it ever came to you?

17 MR. WHITAKER: Supporting paperwork wouldn't 18 have come with that revision. The supporting paperwork 19 would have come with the RAP control directive or the 20 MEO1 sheet earlier, before the revision was done.

21 MR. CLARK: And -- okay. Then is there any 22 evidence that the MEO1 sheet came to you?

23 MR. WHITAKER: No.

24 MR. CLARK: And that's that same sheet we've

1 been talking about that --

2	MR. WHITAKER: Correct.
3	MR. CLARK: didn't have all the
4	signatures?
5	MR. WHITAKER: Right.
6	MR. CLARK: So, is so, in your office, is
7	there any way to cross check, as you're checking these
8	entries off it appears that somebody was assuming
9	all the paperwork was done, and the documentation had
10	been provided and approved by FAA, and they were
11	checking this off. Is there any way to cross check
12	that?
13	MR. WHITAKER: Yes. We could go back and do
14	that.
15	MR. CLARK: Do you routinely do that on
16	MR. WHITAKER: No. Generally, you know, we
17	have already looked at all of the MEO1s, and these
18	revisions that you've and that transmittal sheet
19	that you're referring to there, before that information
20	is inserted into the book, it is passed around to all
21	the partial program managers, the principal maintenance
22	inspector and the principal ops inspector I mean,
23	avionics inspector.
24	So, everybody has a chance to review those

1 changes before it's actually inserted into the manual. So, --2 MR. CLARK: That's assuming it got to you? 3 4 MR. WHITAKER: Correct. 5 MR. CLARK: And you have no record that it 6 ever did? 7 MR. WHITAKER: Right. 8 MR. CLARK: You don't -- you have a log-in procedure or anything like that to --9 10 MR. WHITAKER: No. We don't log it in. 11 MR. CLARK: Given that -- were you involved 12 when the package was sent after the accident, the supporting material for the grease change? 13 MR. WHITAKER: 14 Yes 15 MR. CLARK: And were you involved in the process of returning that as an unsatisfactory package? 16 17 MR. WHITAKER: Yes, I was. Tim, the MD-80 18 program manager, at that time, he was the assistant principal, and I gave him that project, but I worked 19 with him on that throughout, and he kept me up-to-date 20 21 on what was his thoughts on the whole thing. MR. CLARK: All right. Now, the fact that 2.2 23 you returned it after the accident, what are your thoughts, looking at that package? What is the 24

1 likelihood it would have been approved or passed

2 through your process before the accident, at the time 3 in 1997?

4 MR. WHITAKER: Right. Well, we returned it 5 back because we didn't feel that it was sufficient data 6 to show justification for the change.

7 MR. CLARK: Is that based on the concern that 8 grease was now an issue, and it was after the fact, or 9 do you think that same thing would have occurred 10 before?

MR. WHITAKER: It probably would not have occurred before because, you know, the grease -actually, we -- you know, we were still unaware that there had been a change, and there would have probably been nothing to drive us to that, unless some indicators started showing up.

MR. CLARK: AeroShell 33 seemed like an okaything to do?

19MR. WHITAKER: I don't really think it seemed20like it. I mean, we were unaware of it. So, --

21 MR. CLARK: No. I mean, if -- yeah. You 22 were not aware of it. So, there was nothing to happen 23 --

24 MR. WHITAKER: Right.

1 MR. CLARK: -- in '97. What I'm asking is, for the way the FAA looked at grease and changes of 2 grease and materials in 1997, do you think that would 3 4 have just -- you'd have looked at the paperwork, and it 5 would have seemed reasonable to you? 6 MR. WHITAKER: Not with the data that was 7 available there. There would have been questions on 8 it. MR. CLARK: Okay. And then, if you'd sent it 9 10 back, would you suspect at that time that it could have 11 been generated -- what was lacking in that data? 12 MR. WHITAKER: It was more advertisement, is what we saw it as, Tim and I, when we were reviewing it 13 14 from Boeing. I mean, there was a lot of good 15 information in there, but there was nothing to substantiate saying yes, this will work on an MD-80. 16 17 MR. CLARK: If you -- in that package that you had after the accident, was that letter about no 18 technical objections included in there? 19 MR. WHITAKER: Yes, it was. 20 MR. CLARK: Well, did that raise a flag to 21 2.2 you at that time? 23 MR. WHITAKER: Yes, it did. MR. CLARK: And if that had been included in 24

1 the package earlier, you assume it would have raised 2 the same thing?

3 MR. WHITAKER: Correct. No technical4 objection always raises a flag in our office.

5 MR. CLARK: Okay. How do you handle it? It 6 seems like there's a flood of changes that come to your 7 office every month. How do you handle those? How do 8 you stay ahead of them and make sure you're making the 9 correct decisions?

10 MR. WHITAKER: It's a lot. Usually the first 11 thing we'll do is divide it up and pass it out to the 12 respective program managers for their review first, and 13 if it's an avionics issue, then obviously it goes to 14 Avionics first.

15 We attach an initial list on there and cross out the people that don't need to review it. Obviously 16 17 the principal ops inspector doesn't need to review a 18 change to the entire change procedure or something like So, we'll pass it, and each one of us review the 19 that. package, initial it, and then it gets distributed, and 20 then the transmittal sheet or however it's distributed 21 2.2 will get filed.

23 MR. CLARK: Okay. And are these the same 24 people that have to manage the ATOS Program that's on-

1 going now?

2 MR. WHITAKER: The same ones from our office, 3 yes. MR. CLARK: So, they're -- this is part of 4 5 their duty, and then they have ATOS, also? 6 MR. WHITAKER: Correct. 7 MR. CLARK: Is it possible that in reviewing these, that there are things that can slip through or 8 9 get through, recognizing now that you don't have a set 10 of documents that clearly came to you? 11 MR. WHITAKER: Yes. 12 MR. CLARK: Aside from documents that don't get to you, just the fact that there's a lot of these 13 14 changes? 15 MR. WHITAKER: Right. Things can slip through, you know. In the FAA, with our surveillance, 16 17 obviously on program changes and that, we try to do 100 percent that comes through, but there's always the 18 chance that things are going to slip through, yes. 19 20 MR. CLARK: Okay. Before all of this 21 happened, was grease a big issue or oils or greases, 2.2 changing lubrications? Did that -- I mean, was that 23 something people --24 It was not a big issue. MR. WHITAKER: No.

You know, in the past, there was never anything to
 drive anybody to start paying particular attention to
 grease.

4 MR. CLARK: Things like corrosion
5 compatibility and things like that just weren't quite
6 on --

7 MR. WHITAKER: Well, protective coatings in
8 relationship to corrosion, that's monitored through the
9 CPCP Program, and --

10 MR. CLARK: But protective coatings are 11 specifically designed to prevent corrosion. I'm 12 talking about just grease in general. The issues of 13 switching greases and the subtle things we know about 14 now, were your people aware of those type of subtle 15 things back then?

16 MR. WHITAKER: I would say yes, they're aware 17 of it, but there was nothing really reaching out to say 18 we really have got to start looking at grease.

MR. CLARK: Okay. All right. On the issue -- we talked yesterday about a tools audit, and it was said that you requested that. I believe that it was you.

23 MR. WHITAKER: Correct.

24 MR. CLARK: Okay. How were you involved in

1 that audit? You requested it. Then what happened?

2 MR. WHITAKER: Okay. We requested it, and we 3 did request that through Mickey Cohen, and he took 4 charge of that right away. He had a 100 percent audit 5 done of the entire company of all their in-house 6 manufactured tools.

7 They were looking for -- to ensure that each 8 tool, they had the data on hand, the specifications and 9 drawings, whatever it required that was an approval, to manufacture these tools. If they could not 10 substantiate them, they immediately quarantined them, 11 12 took them out of service, and then they provided us a spread sheet of the tools and a summary on that. 13 MR. CLARK: Okay. Were you involved in any 14 15 of that? Were you watching or seeing --MR. WHITAKER: No. 16 17 MR. CLARK: -- how they processed that? MR. WHITAKER: No. And what we've done is 18 I've asked for some additional help from CSET on this. 19 As we speak, I have three people from -- that CSET 20 21 provided that have some background in tooling and 2.2 calibration issues, that are there now. They have been 23 for about the last week and a half or two weeks, going behind now and taking another look at the entire 24

1 program, and as soon as I get back from here, then I'm supposed to meet with them, and they're going to show 2 me their findings, and we've got a commitment from 3 4 Alaska to work to clarify any problems. 5 What I asked for was a squeaky clean absolute 6 tooling program. 7 MR. CLARK: Okay. So, basically they went through their process, and now you have FAA eyes 8 9 looking at their outcome? 10 MR. WHITAKER: Correct. MR. CLARK: Okay. Do you know, have any 11 12 firsthand knowledge, of how they ran that operation? 13 MR. WHITAKER: Not firsthand, where I've been out there. I have not been able to get there, but I've 14 15 had people there from --16 MR. CLARK: Your people? 17 MR. WHITAKER: Correct. MR. CLARK: Do they think it's been done 18 correctly? 19 20 MR. WHITAKER: They've found some problems, you know, and I'm looking at the tooling issue as a 21 whole, including calibration and the whole program. 2.2 23 MR. CLARK: When you say they found some problems, I'm talking about -- are those problems they 24

1 found in the way the audit was done?

2 MR. WHITAKER: Yes. MR. CLARK: So, they -- so, however that 3 4 audit was going -- on-going, there are certain 5 guestions that have been raised? 6 MR. WHITAKER: Correct. 7 MR. CLARK: And you're involved in --MR. WHITAKER: Yes. 8 9 MR. CLARK: -- sorting those out? Okay. 10 MR. WHITAKER: And their CAS Program is also involved in it now. Their auditors. 11 12 MR. CLARK: Okay. Thank you. MR. WHITAKER: Hm-hmm. 13 MR. HAMMERSCHMIDT: Thank you, Mr. Clark. 14 15 Concerning this tool audit that's been discussed, which exhibit number is that to the public hearing, or should 16 17 I have asked that matter of factly? MR. RODRIGUEZ: The tool audit has not been 18 received and therefore is not in the exhibits. 19 20 MR. HAMMERSCHMIDT: As of right now? MR. RODRIGUEZ: As of right now. Yes, sir. 21 2.2 MR. HAMMERSCHMIDT: Okay. And do we have a 23 projected exhibit number for it, though? Have you thought that far -- looked that far ahead? 24

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MR. RODRIGUEZ: No.

MR. HAMMERSCHMIDT: Okay. Well, we'll 2 discuss that later. I thought I had heard that it may 3 have already received a designation. 4 5 MR. RODRIGUEZ: No, sir. I didn't make a 6 designation. 7 MR. HAMMERSCHMIDT: Okay. Thank you, Mr. Rodriguez. Going next to Dr. Ellingstad. 8 9 DR. ELLINGSTAD: Just real briefly, Mr. 10 Whitaker. What involvement do you have with the 11 Alaska's Reliability Program? 12 MR. WHITAKER: Well, it's an approved program through Operations Specifications under D-74. I'm not 13 14 sure where to go. 15 DR. ELLINGSTAD: Well, what I'm trying to get at is, what do you do in terms of your role with 16 17 respect to examining the adequacy of that program of tracking --18 19 MR. WHITAKER: Okay. 20 DR. ELLINGSTAD: -- data, etc. MR. WHITAKER: Part of the program is that 21 2.2 they provide us with monthly statistical reports. We 23 get their monthly report which has each fleet type listed in it. It's got all the parameters, all the 24

1 alert values. So, it's broken down into ATA chapter by system. Some components are individually tracked. So, 2 3 we get to see, you know, what the program is telling them on a monthly basis, and normally we attend their 4 5 meetings. We haven't been able to here recently 6 because of our workload, but -- so, we're -- under 7 normal operating conditions, we're actively involved. 8 DR. ELLINGSTAD: And do you have a 9 responsibility to make some assessment as to the 10 comprehensiveness of the data that they're using to track component removals or other kinds of data? 11 12 MR. WHITAKER: Yes, we do. DR. ELLINGSTAD: Okay. Are you satisfied 13 14 that that program is tracking the kind of information 15 that's appropriate? MR. WHITAKER: I believe it is. We did the 16 17 same review of Alaska's program that went on at the other airlines here recently, using the same criteria, 18 audit checklist, I quess you call it, that they used on 19 the other carriers. That's still in progress, and it's 20 21 -- you know, we found some minor things, is the way I 2.2 would categorize them.

There's some tweaking that needs to be done,you know, but as far as the data they collect, and how

1 they collect it, there were some suggested -- we had asked for CSET again to provide somebody with some 2 reliability background to participate in that. 3 4 So, -- and I tried to participate in it. I 5 was involved, but I was in and out. We did keep a 6 constant, though, with the principal avionics inspector 7 and the CSET person that was there to go through that checklist, and we're also going to, I hope it's open by 8 now, it should be, an SAI on that, to complete an SAI 9 10 on the Reliability Program. 11 DR. ELLINGSTAD: Okay. Mr. McCartney had 12 testified the other day that any changes in lubrication intervals or things like that would require a 13 reliability evaluation. Would you ordinarily see that? 14 15 MR. WHITAKER: Yeah. That would come with 16 the monthly report. 17 DR. ELLINGSTAD: Okay. Thank you. 18 MR. WHITAKER: Hm-hmm. MR. HAMMERSCHMIDT: Thank you, Dr. 19 Ellingstad. Let's see. Let's go to Mr. Rodriguez for 20 21 another question. 2.2 MR. RODRIGUEZ: Yes. Just a few, sir. Mr. 23 Whitaker, I'm wondering if -- since the earlier interviews we had where your activity changed from a 24

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SAT to a special inspection as far as planning was
 concerned and implementation of it, is there unanimity
 within your Certificate Management Team with respect to
 the use of self-disclosure versus enforcement in a SAT?
 MR. WHITAKER: Yes. They think the way I do,
 pretty much, is what I've gotten from everybody in the
 Certificate Management Office.

8 MR. RODRIGUEZ: All right. Thank you. And 9 with respect to the special inspection that you 10 participated in, have you or are you familiar with the 11 action plan that was generated by Alaska Airlines in 12 response to that?

13 MR. WHITAKER: Yes.

14 MR. RODRIGUEZ: Could you comment in general 15 terms as to the adequacy of that plan at this point? 16 MR. WHITAKER: Yeah. I just attended a 17 meeting before we came here to get updated on where 18 they're at. I don't remember the exact number, but 19 they're nearing completion on the entire action plan. 20 It's down to just a few things left now.

21 MR. RODRIGUEZ: All right, sir. That's all I 22 have, sir.

23 MR. HAMMERSCHMIDT: Thank you. Are there 24 other questions for this witness from NTSB personnel?

1 Mr. Berman?

2 MR. BERMAN: Sir, thinking about the tool audit, did the tools in that include the brackets that 3 4 are used on the -- were used on the older aircraft? 5 MR. WHITAKER: This most recent audit, are you talking of? 6 7 MR. BERMAN: Yes. MR. WHITAKER: Yes. It included 100 percent 8 of all their in-house manufactured tools. 9 10 MR. BERMAN: And what were the findings on 11 the brackets? MR. WHITAKER: Well, all the brackets, after 12 -- as of a few months ago, tools relating to the 13 attached fittings and the restraint fixture on -- for 14 15 an end play check, all those were purchased from They have specifications on all those. 16 Boeing. 17 MR. BERMAN: Okay. And just following up on Mr. Rodriguez's question about self-disclosure and 18 SATs, has anyone else given you any guidance about 19 whether self-disclosure's appropriate to SATs? 20 21 MR. WHITAKER: No, I haven't got any other --2.2 MR. BERMAN: Okay. Thank you. 23 MR. CLARK: You just -- in response to Mr. Berman's question, you asked him to clarify the most 24

recent audit. What other audits are there out there? 1 MR. WHITAKER: Well, during the NSI, we did 2 -- part of the NSI inspection was to look at -- mainly 3 that was a tool calibration at that time. 4 5 Subsequently, I asked for two inspectors 6 actually from the Seattle FSDO to go back over to 7 Alaska and look at the calibration program. It was 8 early on right after the NSI. 9 Then we asked them to do their 100 percent 10 audit. I'm getting maybe a little confused on all my audits here. I've got audits everywhere. So. 11 12 MR. CLARK: Okay. I'm not sure where we stand on knowing about any or all of those audits. 13 Sp, we'll sort that out, and we may make a request, if we -14 15 - I've lost track of it. MR. RODRIGUEZ: You're speaking with respect 16 17 to the --MR. CLARK: NSI audits, the two FSDO 18 inspectors. 19 20 MR. RODRIGUEZ: We have the action plan. It's an exhibit, and we also have the latest CSET 21 2.2 evaluation. I call -- I think they were calling them 23 "gates", and this was September 18th to the 22nd was 24 the last one we got.

1MR. CLARK: And does that include the one2with the two FSDO inspectors?

3 MR. WHITAKER: That probably would not 4 include the one with the FSDO inspectors. That was 5 real early on, right after the NSI, that they went over 6 there. That would have been way, way back.

7 MR. CLARK: Let's -- what I'd like to do is, 8 Mr. Donner, sort that out, and if there's information 9 there, provide it to us, would you? All right. Thank 10 you.

MR. HAMMERSCHMIDT: Okay. Thank you, Mr.
Clark. Are there any other questions for this witness?
(No response)

14 MR. HAMMERSCHMIDT: In that case, Mr. 15 Whitaker, we will thank you for your participation in 16 this hearing and for your cooperation with our 17 investigation.

18 MR. WHITAKER: Thank you.

19 MR. HAMMERSCHMIDT: You may stand down.

20 (Whereupon, the witness was excused.)

21 MR. HAMMERSCHMIDT: We are almost at an hour 22 and a half since our last break. Therefore, why don't 23 we -- yes. Why don't we take a 10-minute break? 10 24 minutes. We'll start promptly 10 minutes from right

1 now.

2 (Whereupon, a recess was taken.) MR. HAMMERSCHMIDT: Mr. Hill, please proceed 3 4 to the witness table. 5 Whereupon, 6 BOB HILL 7 having been first duly affirmed, was called as a 8 witness herein and was examined and testified as follows: 9 10 MR. RODRIGUEZ: Please be seated, sir. Interview of Bob Hill 11 12 MR. RODRIGUEZ: And would you give us your 13 full name? MR. HILL: My name is Robert A. Hill. 14 15 MR. RODRIGUEZ: And your occupation? MR. HILL: I'm Manager of the Alaska Airlines 16 17 Certificate Management Office. MR. RODRIGUEZ: And your business address? 18 MR. HILL: 4800 South 188th Street, SEATAC, 19 Washington 98188. 20 MR. RODRIGUEZ: And would you briefly 21 describe your aviation background for us? 2.2 MR. HILL: Yes, sir. I started in the 23 aviation business in about the mid-1960s. I was a 24

flight instructor, worked for a flight school, worked
 my way up to Director of Ops, chief pilot, was a
 designated pilot-examiner.

4 Simultaneously, I joined the Army Reserve and 5 went through basic training and then went to Fort Rutger, Alabama, for maintenance school, and I served 6 7 in the National Guard there for three years as a mechanic, and then I started my career with the FAA in 8 9 1970, and I've been in seven field offices and three 10 regional offices. Five of them, I've been the manager of the office. 11

12 MR. RODRIGUEZ: When did you come to the 13 Seattle Field Office, the Flight Standards District 14 Office?

MR. HILL: I think it was in about 1988-89 time frame.

MR. RODRIGUEZ: Okay. And would you tell uswhat airman ratings you have?

MR. HILL: I'm the holder of an airline transport pilot certificate, single/multiengine/land and sea, have a certified flight instructor airplane instruments, have ground instructor's basic and advanced and instrument.

24 MR. RODRIGUEZ: And do you have any specific

1 type ratings?

2 MR. HILL: I do not have any. I have about 6,000 hours. 3 MR. RODRIGUEZ: Okay. Dr. Brenner will 4 5 question the witness, Mr. Chairman. 6 DR. BRENNER: Yes. Good afternoon, Mr. Hill. 7 MR. HILL: Afternoon. 8 DR. BRENNER: As Manager of the Certificate 9 Management Office, what has been your experience with 10 ATOS? MR. HILL: I haven't been officially to the 11 12 ATOS School. That said, so, I'm not ATOS-qualified. I've had considerable experience, if you want to call 13 it OJT-type training. Also, the training that Mr. 14 15 Youngblut talked about, the three-day course that he ran for principals and supervisors back in the summer 16 17 time frame of this year. I did attend that course. I've read the appendix of the Orders and 18 So, I have a lot of peripheral knowledge of ATOS 19 that. but have not been to the school. 20 DR. BRENNER: Mr. Chairman, I understand that 21 the witness is scheduled to start ATOS training 2.2 23 tomorrow. So, as a contribution, the Safety Board to the ATOS Program, the Safety Board might try to finish 24

1 his questioning by then.

2 MR. HAMMERSCHMIDT: Mr. Brenner, we would 3 certainly appreciate that. DR. BRENNER: Thank you. 4 5 MR. HAMMERSCHMIDT: Therefore, without any 6 further delay, let's proceed. 7 DR. BRENNER: Thank you. I understand that since the accident, the office has attempted to 8 9 increase the staffing from 12 to 30 inspectors to meet 10 the needs of the ATOS Program, is that correct? 11 MR. HILL: It's not 30 inspectors, but it 12 will be 30 people at the end. That includes support people as well. 13 DR. BRENNER: How did you -- how many 14 15 inspectors is that? 16 MR. HILL: I think it's about 20 inspectors, 17 front-line inspectors, and I would have to count it up, but that's a ball park, 20-21 inspectors. 18 DR. BRENNER: And how did you determine the 19 number of 30 were necessary? 20 MR. HILL: Well, when I first got there, Brad 21 Pearson, our division manager, asked me to try to do an 2.2 23 analysis of what I thought would be efficient for the 24 office.

1 I did do that. I came up basically that we needed eight ops inspectors, eight maintenance 2 inspectors, three avionics. So, that's eight, 16, 19, 3 4 and, of course, we have the DEPM position that was 5 spoke to earlier, and then I have two assistant managers, one on the Airworthiness side and one on the 6 7 Operations side, and then we have two clerical support and an administrative officer, and then the analyst 8 position that's been spoke about here recently. 9 10 DR. BRENNER: Have you filled the analyst 11 position? 12 MR. HILL: We have filled the analyst position, and she reports to duty this coming Monday. 13 DR. BRENNER: And how many of the other 14 15 positions have you filled? 16 They're all right in the final MR. HILL: 17 process. The Ops supervisor position is still vacant, but the bid has been completed. It's being paneled at 18 the present time. When I get back to work next week, I 19 -- we should be in the final thrust of that selection. 20 21 There was an Ops inspector position that was 2.2 vacant, but we just hired a person from the U.S. 23 Marshals Office to fill that position, and a third position was an AST, which is kind of like a 24

1 paralegal/paratechnical person, and that -- the interviews for that position was occurring this week. 2 So, we would be at full complement probably 3 4 within a couple of weeks, certainly by the end of the 5 calendar year. 6 DR. BRENNER: And how did you obtain the 7 extra staffing positions? MR. HILL: When I came up with the 8 analyzation and presented it to the division manager, 9 10 he basically approved it, and we went forward with 11 that. 12 DR. BRENNER: And I understand your office is also using an augmented surveillance plan that combines 13 ATOS surveillance with PTRS, the earlier system 14 15 surveillance. MR. HILL: That is correct. 16 17 DR. BRENNER: Why did you develop that? MR. HILL: When I moved over to the CMS CMO, 18 about the first of June, it became obvious to me, 19 looking at the ATOS figures and where we were with the 20 EPIs and SAIs, and all the activities that were 21 occurring in the CMO, I sat down with our division 2.2 23 manager as well as my system manager and talked about options, and we came up with going to an augmented 24

surveillance, which is the traditional surveillance
 prior to ATOS.

3 DR. BRENNER: Would you recommend it to other 4 certificates?

5 MR. HILL: That would be very difficult for 6 me to answer because I don't know the situation in each 7 particular CMO. In our particular case, with all the 8 activities, things that were occurring at the time, I 9 felt like it was right for the Alaska CMO.

DR. BRENNER: How did the office conduct ATOS surveillance before the accident with only 12 inspectors and without the augmented surveillance?

MR. HILL: And I, you know, was not there at that time, but I think looking at the figures that we looked at with Larry Youngblut here, they didn't do very well with the numbers.

I am aware that the office put a lot more effort into the SAIs than the EPIs, and, of course, those are much more time-consuming, and one must keep in mind that the SAIs, whether you're United Airlines certificate or Alaska certificate, the workload that goes into either one of those SAIs is equal.

23 So, where maybe the United CMO has 80 people 24 to do the workload, of course, Alaska had a minimum

number. So, that caused part of the low numberage on
 the Alaska certificate.

3 DR. BRENNER: Were you the Seattle FSDO 4 acting manager during part of that time, before the 5 accident?

6 MR. HILL: Yes.

7 DR. BRENNER: Briefly?

8 MR. HILL: It was in either the November or 9 December time frame, our manager went off for a year 10 detail to Core Compensation, and I was moved up to be 11 the acting FSDO manager, and I was in that position 12 either in November/December '99 to the time I moved 13 over to the CMS in June, June 1st of 2000.

DR. BRENNER: And do you know within the surveillance that was accomplished during that year prior to the accident, did the surveillance identify any negative findings?

MR. HILL: I'm not aware of any, and one must keep in mind that I was only in that acting manager's position about two-three months before the accident occurred.

DR. BRENNER: In interviews, the PMI from that period, and also the office manager from that period, indicated their belief that the demands of the

1 ATOS Program caused a deterioration in oversight. They also indicated that they raised concerns within the 2 3 Were you aware of such concerns? FAA. MR. HILL: No, I was not. 4 5 DR. BRENNER: John Fowler -- our last two witnesses, John Fowler -- well, not last two. 6 John 7 Fowler and Bill Whitaker talked about discussion that occurred between the airline and the FAA shortly after 8 the accident concerning a possible SAT inspection. 9 10 MR. HILL: Yes, sir. 11 DR. BRENNER: I believe your name came up. 12 Could you help us, just describe your involvement in that activity? 13 MR. HILL: Yes. And I've had a chance to 14 15 review some of the documents and go back over it. I think everybody's probably got a little different twist 16 on it. My own will be a little different, but I think 17 18 they parallel each other. The month of February, I was in training for 19 three -- in Florida, going to training and vacationing 20 for about three weeks. I returned to the office on 21 2.2 February 28th. 23 I immediately went into another class on core compensation for a couple of days, but I did go to --24

when I first engaged the office, I found that there was
 a message for me to attend a meeting between Brad and
 Phil Hoy, and I was asked to attend that meeting, and
 it was to discuss a SAT.

5 I went to that meeting, and the conversation mainly was between Brad and Phil. However, during that 6 7 conversation, it was the first time I heard the SAT, 8 and I asked questions about it because it was a term that I was not familiar with at that particular time. 9 10 You want me to go on with the whole story? 11 DR. BRENNER: Yes. I'd appreciate it, --12 MR. HILL: Okay.

13 DR. BRENNER: -- please.

MR. HILL: What I remember is that we -- one of the things I was doing as the acting FSDO manager is I had a desire to go meet all the key various operators. I had meetings with ProAir, B.F. Goodrich. I believe the meeting that was -- I had with John Fowler on March 6th was a scheduled meeting for me to become familiar with him after the vacation.

21 So, when I went to Brad's office on the 4th, 22 and we talked about the SAT and things, we moved 23 forward, and I believe at that meeting on Monday, the 24 6th, and -- because what Brad had done is directed a

1 SAT, and, so, we proposed that to Alaska at that time. 2 DR. BRENNER: Okay. And when you say "Brad", that would be Brad Pearson? 3 That is correct. 4 MR. HILL: 5 DR. BRENNER: Manager of the Northwest 6 Mountain Regional Office. 7 MR. HILL: And, so, when we were there on Monday, the 6th, we proposed -- it was Phil Hoy and 8 9 myself that met with John Fowler. He -- Phil was 10 taking me with me -- taking me with him as an introduction, and during that meeting, we proposed the 11 12 SAT. DR. BRENNER: And in the discussion, did the 13 proposal include the possibility of self-disclosure as 14 15 a way of eliminating the need for enforcement action? 16 MR. HILL: I don't -- what I remember that particular time, I remember John Fowler raising that 17 question. How would enforcements be handled under such 18 a SAT concept? 19 20 What I remember was that Phil thought that it could be handled as self-disclosure but wanted to get 21 confirmation first that that would be more of a 2.2 23 corporate decision. 24 What I remember is that we went back and

1 talked about it corporately and agreed that selfdisclosure was appropriate, and I don't know whether it 2 was that day or the next day, we confirmed back with 3 4 John Fowler that it would be acceptable. 5 DR. BRENNER: Did the concept of self-6 disclosure originate with the airline or with the FAA? 7 MR. HILL: As I remember it, John Fowler 8 asked the question, and it was a question we weren't 9 quite prepared for in that meeting, and Phil didn't 10 have the right answer right at that particular time. 11 Of course, Brad was ATOS-qualified, and Phil 12 was ATOS-qualified, and he thought it met the criteria but was not clear. 13 DR. BRENNER: Did --14 15 MR. HILL: That's why I think we took an IOU 16 which didn't last very long. 17 DR. BRENNER: Did you support the idea of a 18 SAT inspection with self-disclosure? MR. HILL: At that particular time, I mean, 19 the first time I heard SAT was on Friday, and on 20 21 Monday, we're talking about it with the airline. I had 2.2 very little knowledge of the -- of even what a SAT 23 looked like or what it was. I mean, I know a lot more about it now, and I 24

1 have a different opinion than -- and what I'm trying to relate to you is what I knew at that particular time. 2 DR. BRENNER: Did the legal staff, the FAA 3 4 legal staff agree with this approach? 5 MR. HILL: Well, what happened was -- and I 6 got to tell you from the time limit that we began 7 talking about a SAT, which is March 4th, the first time I heard about it, March 16th was when we abandoned the 8 SAT concept. So, we're talking about a very, very 9 10 narrow period of time here. 13 days, and you take out 11 four days for holidays, and there were two weekends. 12 We're talking about the SAT concept only existed for 13 about nine days. What I remember is that when the SAT concept 14 15 was talked to Peter Leyland of our Legal Department, he was not inclined to -- he didn't think it was the right 16 17 thing for the agency to be doing. DR. BRENNER: And what is that? 18 MR. HILL: Well, --19 DR. BRENNER: What was his thinking? 20 21 MR. HILL: -- he just felt in light of the 2.2 accident, the investigation that was occurring on --23 down in Oakland, that it might not be the right thing. I remember carrying that back to our division manager, 24

1 Brad, and he suggested that we have a meeting, which we did, and those in attendance at the meeting was Brad 2 Pearson, Peter Leyland, myself and Phil Hoy, and we 3 4 talked about, you know, the merits of a SAT. 5 DR. BRENNER: And when was that meeting? 6 What time frame? 7 MR. HILL: Well, it had to be somewhere the 8 week of March 6th, and I think fairly early on, March 9 6th, 7th, 8th, in that time frame. Monday, Tuesday, 10 Wednesday. 11 DR. BRENNER: And what was the resolution of the meeting? 12 MR. HILL: Basically, Brad listened to 13 Peter's concerns. Brad felt that the accident -- with 14 15 the accident, there really was not enough information to know what the cause of the accident was. With the 16 17 grand jury portion down there, there was very little information coming out of the grand jury or the IG of 18 the FBI. 19 So, we're looking at an ATOS carrier. 20 In his 21 mind, that we had a problem that we wanted to drill in 2.2 on, and the way that the system that's used to drill

24 problem is through a SAT concept. So, in his mind,

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down on a particular thing or get to the root of the

there was no reason to abort that national policy of a
 SAT.

Now, I might also add that part of what 3 4 caused us to do a SAT was -- and it's long before Bill 5 ever came along. We're talking about almost the whole 6 month of -- whole year of '99 and early part of 2000. 7 We've been getting a lot of feedback from out of RWP region, from the grand jury, from different sources, 8 9 that there's a problem in the Oakland Maintenance Base 10 with releases.

We've sent inspectors down, interviewed about 11 12 10 mechanics down there, was not able to get anything out of it. Also in mid-1999, we sent two inspectors 13 down where they did an audit for a week, going through 14 15 the papers. They were unable to find out what it was. So, we were catching a lot of rumors, a lot 16 17 of innuendos. So, -- and we weren't able to pick it 18 up. We felt the need to do something as a management team, and I think that was the concept used to move 19 forward and try and find out what the problem was. 20 DR. BRENNER: When was Bill Whitaker involved 21 2.2 in this process? 23 MR. HILL: Bill Whitaker did not report to

23 MR. HILL: BIII Whitaker did not report to 24 duty as the PMI. As he mentioned, he was picked up

1 January 16th as the PMI, but he had back-to-back courses. His first duty date was February 26th. 2 So, I might also add when I went to that 3 meeting on March 3rd, the SAT concept was not created 4 5 at that meeting. I've looked at some CC mail traffic 6 that was occurred while I was on vacation, which you 7 all have copies of, which was in that request of all the information we have. 8 9 Obviously while I was in Florida, Brad and 10 Phil Hoy had conversations about a SAT on at least one

before I arrived on the scene. I believe it also was in place before Bill Whitaker showed up on the scene. 13 DR. BRENNER: And did Bill Whitaker agree 14 15 with the approach? 16 MR. HILL: You know, it's so hard to put that 17 together because he wasn't in place. So, it's hard to 18 say did he agree with that approach. I believe the approach to SAT was put into place before he arrived. 19

or two occasions. So, that SAT concept was in place

So, it's hard to answer that question. 20

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DR. BRENNER: And in general, why did the 21 2.2 office want to pursue an inspection that might preclude 23 enforcement?

24 MR. HILL: You know, I think what they were

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1 looking at is -- we were looking at is that we knew that there was some type of problems people were 2 alluding to down in Oakland. We wanted to try to find 3 out what it was. 4 5 I think we've already done two inspections 6 earlier in '99 that revealed nothing. So, the thought 7 was that if we go forward and use the -- work with the 8 operator, maybe we can find out what might be the 9 problem down there. 10 DR. BRENNER: And those two inspections, were 11 they done within ATOS? 12 MR. HILL: I can't answer whether that was in SAI or EPI or not. 13 14 DR. BRENNER: All right. 15 MR. HILL: I am aware that Corky Lukes and Tim Bennett went down and spent a week and a half down 16 17 there going through records and also interviewing various mechanics. 18 DR. BRENNER: I believe you helped form the 19 Certificate Management Section at that time in 1991 and 20 served twice as manager, and you indicated that you do 21 2.2 have a background in maintenance. 23 Are there any other managers up to the time of the accident who had authority over the Certificate 24

1 Management Section, who had a maintenance background?

2 MR. HILL: I'm not sure I would qualify me as a maintenance background. I mean, I did go through 3 4 training and did do some Reserve stuff, but I would 5 limit that as very limited. 6 DR. BRENNER: Are you a licensed mechanic? 7 MR. HILL: No, I am not. 8 DR. BRENNER: Okay. 9 MR. HILL: I'm not aware of any maintenance 10 people that have been in a supervisory position over 11 the Alaska group. 12 DR. BRENNER: And up to the time of the accident, were there managers who had authority over 13 the Certificate Management Group who had an airline 14 15 background? MR. HILL: You know, I -- there's one person 16 17 that served, and I don't know what his background was prior to coming with the FAA, and that's Bill Baldwin. 18 I do know Phil Hoy did not, and, of course, I did not, 19 but I'm not sure what Bill Baldwin's background was. 20 21 DR. BRENNER: Okay. 2.2 MR. HILL: I know he's definitely an air 23 carrier ops inspector, but whether he actually ever flew in 121 operations, I'm not sure. 24

1 DR. BRENNER: Okay. Have you read the report of the National Inspection Team? 2 MR. HILL: Yes, sir, I have. 3 4 DR. BRENNER: What did you learn from the 5 report? MR. HILL: Well, I think from the -- the big 6 7 thing that we were -- that we kept hearing the rumors and things about the Oakland Maintenance Base. I think 8 9 it was the biggest thing in that NSI report, was that 10 there was a problem in Alaska Airlines with heavy maintenance, but not just limited to Oakland, but it 11 12 was to Seattle as well. Both that there was a lack of procedures, and 13 there was people not following the procedures that was 14 15 there, and there was many items that weren't being signed off on task cards and things of that such. 16 17 DR. BRENNER: Do you think the Certificate Management Office should have picked up these 18 deficiencies before the accident? 19 MR. HILL: You know, it's so hard to answer 20 that question. The inspection and surveillance that 21 I've been associated with with Flight Standards for 30 2.2 23 years, it's always directly related to resources, how much we look at, how much we can drill into them. 24

I mean, I would like to think we could catch everything, but the truth is we don't have the 2 resources nor the times to go into every different 3 4 area. 5 DR. BRENNER: Okay. Thank you, Mr. Hill. 6 That completes my questions. 7 MR. HAMMERSCHMIDT: Thank you, Dr. Brenner. Are there other questions from the Technical Panel? 8 9 Mr. Rodriguez? 10 MR. RODRIGUEZ: Mr. Hill, could you tell us what qualifications the analyst you've hired has? 11 12 MR. HILL: She has a Master's degree from

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California State University. She worked in the -- with 13 the school for -- after graduation for a couple of 14 15 years, analyzing various data for the university.

16 She went to work after that for a company 17 called -- and I believe it was FDA, Federal Data Association, which is an analytical-type thing, and 18 they do a lot of contractual-type work for various 19 government agencies, and what she would do is analyze 20 data that -- for this corporation and provide it to 21 2.2 government agencies.

23 MR. RODRIGUEZ: And was her Master's degree in some form of analysis or statistics or something? 24

1 Do you know?

2 MR. HILL: You know, I don't remember exactly what it was. 3 4 MR. RODRIGUEZ: Does she have any aviation 5 background? 6 MR. HILL: Yes. She was in the Air Force, 7 and she is very close -- she was working with airplanes and the Air Force, and I forgot exactly what the 8 Reserves are. In addition, her husband is an air 9 10 carrier maintenance inspector in the Van Nuys FSDO. 11 MR. RODRIGUEZ: In layman's terms that you 12 and I can understand, can you tell me what she's going 13 to do there? MR. HILL: Well, I think there's a lot of 14 15 data that the FAA has, and we've heard various things mentioned, SPAS, but I think there's a lot of different 16 17 things that we collect and everything that we don't do a lot with. 18 I'm really looking forward to her coming and 19 trying to do something with this data and see if it 20 really leads us somewhere. I think there's a lot of 21 data in our databases, but I don't know if we're 2.2 23 effectively using it. 24 MR. RODRIGUEZ: Now, you mentioned an Ops

inspector you've hired from the U.S. Marshals Office?
 MR. HILL: Yes. They have a DC-9, the U.S.
 Marshals Office. He presently is flying the DC-9.
 Actually, it's an MD-87, and he is -- I think he's out
 of Phoenix, and he flies it down to South America. He
 flies 85 hours a month.

7 MR. RODRIGUEZ: I see. Okay. I didn't 8 understand the staffing. We were told earlier that 9 there was 30 there, and then I heard you say that --10 but just about the first answer to a question, that 11 when you got the 30 or something. Do you have 30 or 12 not?

MR. HILL: I've got 27 on board right now. Monday, I should have 28. There's two more to be hired which is the Ops supervisor or system manager, and the AST, and they're both in the final process of selection. I expect to be at that 30 before the end of the month.

MR. RODRIGUEZ: Now, I asked earlier about the special inspection of Alaska Airlines that was conducted. I noted that it was -- there were an awful lot of local folks involved in the inspection. Is that typical for an inspection of an air carrier, to have the certificate-holding people do the inspection?

1 MR. HILL: You know, I've seen them -- the composition of a group vary from all kinds. I think in 2 this particular case, we knew where we wanted the main 3 4 focus, and for the -- to have people that are familiar 5 with the Alaska Airlines to agree will help us drill 6 in, especially the fact that we aborted the SAT, and we 7 wanted to go in with the traditional inspection. We wanted to really get down to the root 8 cause here and find out what was wrong. 9 10 MR. RODRIGUEZ: And are you familiar with the 11 Air Carriers Action Plan in response to the special 12 inspection? MR. HILL: Yes, sir, I am. 13 MR. RODRIGUEZ: Could you evaluate that for 14 15 us in general terms? 16 MR. HILL: Well, they -- it basically -- we went forward with -- to amend Alaska Airlines' Ops 17 specs and withdraw their authorization to do heavy 18 checks. So, that action plan that they submitted to us 19 was in response to that, what I consider a fairly 20 strong proposal that we started -- action that we 21 started to take. 2.2 23 It was a pretty comprehensive plan, very comprehensive plan. It included adding additional 24

1 staffing to the organization, building a safety point.

It included rewriting the GMM, which they did on basically an emergency-type thing, and we also put in a safety net on the heavy checks that were coming out after the NSI, so that we had confidence level that the airplanes were coming out and were proper.

7 MR. RODRIGUEZ: And would you comment on the8 progress to implement that plan?

MR. HILL: Well, with that plan, what you --9 10 you know, I think someone alluded to it, and I think it 11 was yourself, Mr. Rodriguez, about a different gate 12 process that was set up, and what we did as an agency is that we formed an 11-person panel to evaluate Alaska 13 Airlines' plan, and it is chaired by our division 14 15 manager, Brad Pearson, and it does -- the panel consists of the three principal inspectors, myself, the 16 17 assistant manager, Brad Pearson, Peter Leyland of our Legal Department, Ed Hugg, who was the AFS-40 team 18 leader of the NSI, and also the PMI of Delta, and Steve 19 Douglas from AFS-330. 20

21 So, it has a cross-section of different 22 people on it. We at Gate 1 reviewed Alaska Airlines' 23 action plan, and we accepted it as a good plan that 24 would help correct the problem.

1 30 days later, we followed up with Gate 2, 2 and what we did between Gate 1 and Gate 2 is collected 3 more data to evaluate to see if Alaska Airlines was 4 moving forward with their original plan. The panel 5 concluded at the end of Gate 2 that Alaska was moving 6 forward.

Gate 3 meeting was just held here back in
October, which was 90 days after the Gate 2 meeting,
and we're continuing to monitor their progress towards
that action plan.

11 Gate 4 meeting is scheduled in the February 12 time frame. I might add that each and every gate meeting, Alaska Airlines' top management has come in to 13 14 the gate meeting and made a presentation on the plan 15 itself and their movement on the plan, and it's been by all the high executives, whether it be the personnel 16 17 talking about how they're moving forward with the personnel, the Vice President of Maintenance, Vice 18 President of Operations, including the President, and 19 trying to cover all spectrums of that action plan. 20 21 MR. RODRIGUEZ: Hmm. Have you had any 2.2 discussions with your division manager with respect to

anticipated growth of Alaska Airlines' fleet?
 MR. HILL: We -- out at the NSI, there was

some concerns about growth. We -- there is -- and I think it's a handbook bulletin or an order that address growth.

4 We had Alaska Airlines respond to that. 5 That's a separate document that Alaska Airlines 6 produced in response to our concerns about their 7 growth. The panel, and I don't remember if it was Gate 1 or Gate 2 meeting, evaluated that growth plan that 8 Alaska submitted to us, and the panel concluded that 9 10 they were happy with the way the growth plan was laid 11 out and the growth that was projected for the future 12 and where it is now.

MR. RODRIGUEZ: How about as that growth affects the workload at your place in the FAA? MR. HILL: Well, I think most of the growth -• what we've seen in the growth plan, most of the growth that Alaska have is -- they're already there, and the growth over the next couple of years was very small, three-four-five percent a year.

20 There was no large growth planned over the21 next five years.

22 MR. RODRIGUEZ: I'm looking at a figure in 23 the report that indicates like 20-percent increase over 24 three years. Is that in the past or is that in the

1 future? I thought they were getting 737-700s now and 900s very shortly, like in April. 2 MR. HILL: Well, there is some additional 3 airplanes, but they're also reducing their MD-80 fleet 4 5 at the same time. 6 MR. RODRIGUEZ: I see. 7 MR. HILL: So, I don't know what the net gain is. I remember three-four percent a year. 8 9 MR. RODRIGUEZ: That's all the questions I 10 have at this time. Thank you, sir. MR. HAMMERSCHMIDT: Thank you, Mr. Rodriguez. 11 12 I guess now we go to the Parties to the public hearing for their questions, beginning with Alaska Airlines. 13 CAPTAIN FINAN: I have no questions, Mr. 14 15 Chairman. 16 MR. HAMMERSCHMIDT: Thank you, Captain Finan. 17 Boeing? MR. HINDERBERGER: We have no questions, Mr. 18 19 Chairman. 20 MR. HAMMERSCHMIDT: Thank you, Mr. Hinderberger. Aircraft Mechanics Fraternal 21 Association? 2.2 23 MR. PATRICK: We have no questions. 24 MR. HAMMERSCHMIDT: Thank you, Mr. Patrick.

1 Air Line Pilots Association?

2	CAPTAIN WOLF: Thank you, Mr. Chairman. Good
3	afternoon, Mr. Hill. Just a few short questions here.
4	I just wanted to get a feeling on how you
5	interfaced with the company and oversaw the operations.
6	We've heard a little bit of talk about that, but I'm
7	just trying to get a comparison between the way you
8	would interact with the company and versus your PMI and
9	the POIs that work out of the office there.
10	In other words, did you end up having like a
11	daily contact, weekly contact, monthly contact?
12	MR. HILL: You know, since I've been there,
13	what I've done is Bill Ayer and I have a monthly
14	meeting scheduled. Certainly those meetings are not to
15	get into principal work or technical work. They're
16	more of how goes it-type things or if there if some
17	of my principals have concerns about certain issues,
18	and they need elevated because they don't feel like
19	action's occurring. Then I can have the established
20	two-way communications with the highest level to
21	discuss those.
22	We've had because we went through various
23	situations over the last couple of months, I've had an
24	opportunity to talk to Bill more often than once a

month, our scheduled thing, just because of the various
 situations that have occurred.

3 CAPTAIN WOLF: So, most interaction is with 4 the people who work for you with the company and their 5 respective areas, and you're dealing with the upper-6 level management?

7 MR. HILL: Yes. I try very hard to stay out 8 of the nuts and bolts technical portion of it. That's 9 not where my expertise lies.

10 CAPTAIN WOLF: You made earlier reference to 11 the two inspections that were conducted in '99, and in 12 that, you stated that they did not identify any 13 discrepancies or any problems, and I'm just kind of 14 wondering if there were some problems or discrepancies, 15 if we had those two inspections in there. It seems to 16 me something was somehow missed.

MR. HILL: And I'm not sure I would classify them as inspections. We were receiving concerns out of our sister region, WP Region, as well as the IG. We wanted to go down there and get a firsthand look at this stuff, but we could not see the same things that we were hearing.

23 CAPTAIN WOLF: Hm-hmm. I guess following up 24 from some earlier questions that we had -- you had had

1 with Dr. Brenner concerning the March 4th or March 6th meetings there, that's when you informed John Fowler 2 that the post-accident FAA inspection would be 3 4 conducted as an SAT. Did Mr. Fowler have any 5 understanding of what an SAT was? 6 MR. HILL: I don't remember whether he did or 7 he did not. I know that when I was there with Phil, Phil explained his understanding of an SAT. This was 8 9 the very first one that we've even tried to undertake. 10 So, we were, you know, in ground that we've never been 11 before. 12 CAPTAIN WOLF: Hm-hmm. So, it would have been explained to him at that time? 13 14 MR. HILL: At the March 6th meeting, yes. 15 CAPTAIN WOLF: Okay. MR. HILL: I believe Mr. Fowler did ask, and 16 17 I think Phil gave an explanation of it. I was present. I know John said he thought I did, but I 18 19 don't think it matters. 20 CAPTAIN WOLF: Were there ever any thoughts given to including various safety reps from the various 21 2.2 organizations at the company, i.e. the various labor organizations, ALPA, AMFA, AFA, dispatchers, etc., into 23 some of these gate meetings? 24

1 MR. HILL: Well, I think the safety panel is an FAA panel that's charged with making sure that 2 Alaska moves forward with their action plan. 3 What we 4 do then in turn is invite the airlines, if they so wanted to, to come to the meeting. 5 6 So, that invitation was offered to Bill Ayer. 7 He's the one that actually decided who would, you 8 know, come from the company and what kind of 9 presentation that they would do. 10 CAPTAIN WOLF: Do you feel personally that 11 perhaps it might be a good idea to include or offer 12 invitations to those groups in the future? I would probably have to decline 13 MR. HILL: to my division chair because he's the one that actually 14 15 chairs it. I'm just one of the 11-member panel. CAPTAIN WOLF: Okay. All right. Thank you 16 17 very much. Thank you, sir. Thank you, Captain Wolf. 18 MR. HAMMERSCHMIDT: Going next to the Federal Aviation Administration. 19 Thank you, sir. Bob, we've 20 MR. DONNER: talked a lot about self-disclosure and the self-21 2.2 disclosure process. Can you in a nutshell describe 23 what self-disclosure is about, and what the process is? MR. HILL: Yeah. It was -- you know, the 24

1 self-disclosure program is one that began close to 10 years ago, and it's an effort -- the airlines have 2 3 their own self-audit program and things like that, and I believe the concept of it was if you find something, 4 5 self-disclose it, and if it meets a certain criteria, 6 it wasn't deliberate, you know, there's not 7 falsification involved, qualifications involved, that the airline would then come forward and come up with a 8 -- disclose it and come up with a comprehensive fix. 9 10 We certainly have the right to deny it, if it doesn't meet certain criteria. So, we do evaluate what 11 12 it is, but as long as it meets the criteria of the thing, we move forward, and it's a partnership or open 13 communications to get things out on the table rather 14 15 than trying to run them under ground. MR. DONNER: Is it described in a document? 16 17 Is there a formal document describing that? MR. HILL: Yes. There's an advisory circular 18 or handbook bulletin that talks about it quite a bit in 19 20 depth. 21 MR. DONNER: When you were talking to Alaska Airlines about the SAT, when did you first see the 2.2 23 draft agreement that they submitted concerning selfdisclosures and that process? 24

1 MR. HILL: I didn't see that document until, I think it was, the September or -- well, let's see. 2 This was December. I think it was like October time 3 4 frame. It was when the NTSB made a formal request for 5 all documentation associated with that SAT thing. 6 The -- that memorandum that was talked about 7 was made by Alaska Legal Department, faxed to our Legal 8 Department, but by the time there was much discussion 9 on it, we had aborted the SAT and moved forward with 10 the NSI. So, there was no reason for them to pass it to Flight Standards or talk about it. 11 12 MR. DONNER: That was September-October of 13 this year, is that right? MR. HILL: Yeah. Well, I've got it right 14 15 here in front of me. The memo we sent to the -- I sent to Washington was dated October 24th, 2000. So, it was 16 within a week of that date that I first saw that 17 18 document. MR. DONNER: Did, in your judgment, that 19 draft represent the conversations you had during --20 when you were speaking about this with the airline? 21 MR. HILL: I didn't read that document in its 2.2 23 entirety. I generally looked at it. To me, it's written in a lot of legalese-type thing. I don't know 24

1 if that -- all that verbiage covers self-disclosure or not or if it goes beyond that. I really don't know. 2 3 MR. DONNER: Okay. Thank you. 4 MR. HILL: What we talked about was the 5 ability under the SAT, that they would have the ability to self-disclose if it met the criteria. 6 7 MR. DONNER: Thank you. Thank you, sir. 8 MR. HAMMERSCHMIDT: Thank you, Mr. Donner. Let me follow up on one question Mr. Donner had. 9 Ι 10 believe Mr. Whitaker said that concerning self-11 disclosure, he couldn't determine where you would draw 12 the line between self-disclosure and perhaps an enforcement situation. 13 14 Do you see that as being a gray area that's 15 difficult to deal with? MR. HILL: Well, I think we all come from our 16 17 backgrounds, and if we think about inspections or surveillance, we don't do self-disclosures. I mean, 18 just like as we did with the NSI, that is an 19 inspection. It's identified as an inspection, and we 20 would do our traditional enforcement. 21 2.2 I think what we got here is we have a SAT 23 which is a safety -- systems analysis team, which is a It's not an inspection. It's made up of both 24 team.

1 the airlines and us, and we're going in to look for a 2 root cause.

MR. HAMMERSCHMIDT: Okay.
MR. HILL: Because it's not an inspection, I
don't know of anything that would prevent selfdisclosures. I think one needs to look at the orders
and the hand -- the advisory circular that talks about
self-disclosures.

9 I don't know what would -- because it's not 10 an inspection, why it would not apply, and I think 11 that's what's been the dialogue here in recent times. 12 MR. HAMMERSCHMIDT: Very good. Going next to 13 the Board of Inquiry for questions. Mr. Berman? 14 MR. BERMAN: Thank you, sir. Hello, Mr. 15 Hill.

16 MR. HILL: Hello.

17 MR. BERMAN: I know you've talked about some 18 concerns that you had about various aspects of the Alaska Air Maintenance Program during 1999, I quess, 19 maybe '98, Oakland Base, but I'd like to explore with 20 21 you how the ATOS System was working in that regard. You were under ATOS during 1999, is that 2.2 23 right? MR. HILL: Yes, but I did not occupy a 24

1 position anywhere associated with Alaska at that time.

2 MR. BERMAN: Oh, I see. Have you had a 3 chance to familiarize yourself with the performance of 4 the systems at that time?

5 MR. HILL: Only what I've seen in, you know, 6 what Larry Youngblut showed in those figures, both on 7 the EPIs and the SAIs, and I do know that the office 8 was focused and why they did so well on ASAI is because 9 they were focused on trying to get that foundation 10 built for the SAIs.

11 MR. BERMAN: Okay. So, you're not aware of 12 what the SAIs revealed in terms of risk evaluations and 13 major findings in '99?

14 MR. HILL: No, I'm not.

MR. BERMAN: Okay. We'll stay on ATOS, but for the future, how do you intend to train and use the new analysts that you just hired?

MR. HILL: Excellent question. I think we're going to start off with showing her all the databases that we have, including ATOS, but there are many other databases, and I think as Larry Youngblut said, they're going to provide some leadership from the National Headquarters with the analysts that they've hired already.

I do know that in the February-March time frame, they are planning a conference to get all the 10 analysts together from the CMOs, and hopefully we'll -they will actually be creating the database and how to analyze it, because I don't think any of our inspectors can provide much guidance in that area.

7 MR. BERMAN: Okay. And what's your
8 expectation right now of what you're going to get from
9 this analyst?

MR. HILL: Well, I would hope that they'll be able to tell us where to target our resources for the future. You know, we just continue to do inspections and surveillances. Airlines are growing. I don't know if we're hitting the right areas or not.

15 My hope is that we can, with the limited 16 resources we got, do a more efficient job and more 17 effective job.

MR. BERMAN: Turning to the events of the
S-A-T, the SAT, did the idea for self-disclosure first
came up after the accident or before the accident?
MR. HILL: Well, the first time I heard of
self- -- the SAT was on March 4th, and it was presented
to Alaska on March 6th. So, it was after the accident.
MR. BERMAN: So, you had testified that the

FAA was concerned about some of the issues of the Oakland Base and such. What kind of an inspection were you planning to run before the accident and then the SAT proposal?

5 MR. HILL: I am not aware of any inspection 6 that was scheduled during that time frame.

7 MR. BERMAN: So, what was the -- what was 8 going on within the FAA in the CMO at that time? You 9 said there were concerns. Tell me about how that was 10 being processed within your office.

11 MR. HILL: Well, you know, it was all 12 hearsay-type information. Most of it was coming out of 13 our sister region down there saying that the IG has 14 found this. We made multiple phone calls to the IG's 15 office, trying to identify what the issues were.

16 We have multiple records of conversations. I 17 made some myself in the January-February time frame, 18 talked to the supervisor down there and got very 19 limited information. Nothing that we could conclude 20 that there was some direction to be going.

21 MR. BERMAN: Did you take any steps to 22 retarget your inspection resources towards that base or 23 in any way to affect what you were trying to find out 24 before the accident?

1 MR. HILL: No. The only thing -- the thing we had done was we had sent inspectors down there 2 multiple times trying to find out what was being trying 3 4 to be said. 5 MR. BERMAN: Well, --6 MR. HILL: Nobody was being clear in what 7 really is the problem? There was nothing that we could sink our teeth in on. 8 9 MR. BERMAN: What methods were they using 10 when they went down there before the accident? Traditional surveillance. 11 MR. HTTT: T don't 12 know. You know, it's hard to identify what an inspection is, but they went down there and did, you 13 know, a thorough review of the records. We can call it 14 15 surveillance inspection. Either one would be 16 appropriate. MR. BERMAN: A base inspection under PTRS? 17 MR. HILL: And we were looking very heavily 18 at the records, interviewing mechanics, because I think 19 they did 10 interviews while they were down there. 20 MR. BERMAN: And what were the findings of 21 2.2 those inspections? 23 MR. HILL: They came back with they did not see anything out of the abnormal. 24

MR. BERMAN: Why do you think they missed
 what was later found?

3 MR. HILL: No idea.

4 MR. BERMAN: Can self-disclosure sometimes be 5 very effective in letting the FAA know about safety 6 issues?

7 MR. HILL: Oh, I think so, yes.

8 MR. BERMAN: You've had experience with it, 9 it sounds like. Do you believe that the success of 10 self-disclosure is somewhat dependent or may be very 11 dependent on the safety culture or the compliance 12 orientation of the airline?

MR. HILL: Yes, and, I mean, the one that we've talked about here, I'll use an example, I mean, we talked about this tool issue a little bit here. That came to us as a self-disclosure. The airline came forward and said hey, look at this end play tool. It's bottomed out. It's not the right tool. So, they selfdisclosed it.

I found that we were able then -- Bill Whitaker was able to drive in, and it opened up a question of all tools that Alaska Airlines had. So, we were able to corral all the tools, and Alaska participated in making sure that there was a complete

100 percent audit of tools. So, I think in that
 2 particular case, it worked very successful.

3 MR. BERMAN: If you put yourself before that 4 happened, before the tool issue, after the accident, 5 you've got the concerns about the Oakland Base. You've 6 got the grand jury. You've got the accident.

7 I know you said you felt -- well, I won't ask 8 that. But, anyway, you're in that situation. Do you 9 think that it was a fair evaluation about Alaska 10 Airlines to say that they were compliance-oriented, 11 safety-oriented?

MR. HILL: Could you -- would you rephrasethat question for me, please?

MR. BERMAN: Well, if you put yourself at the 14 15 time that you were at, after the accident, knowing what you did about the various issues you brought up, the 16 17 grand jury, the problems at Oakland, the accident, would it be a proper evaluation to say that the airline 18 was adequately compliance-oriented? Did you have a 19 strong-enough confidence they were compliance-oriented 20 to be able to progress with self-disclosure? 21 2.2 MR. HILL: I guess I would just rephrase it a 23 different way. We had no reason to believe that they were not compliance-oriented. 24

1 MR. BERMAN: Did they self-disclose after or before the NTSB made inquiries about the tools? 2 MR. HILL: I'm not sure when the NTSB made 3 4 their inquiry about tools. 5 MR. BERMAN: Okay. Okay. Thank you very 6 much. 7 MR. HAMMERSCHMIDT: Thank you, Mr. Berman. 8 We go next to Mr. Clark for guestions, who has no 9 questions. We go next to Dr. Ellingstad. 10 DR. ELLINGSTAD: Just one following up again 11 on the analyst situation. Who does your new analyst 12 report to? 13 MR. HILL: She'll report directly to me. DR. ELLINGSTAD: And is there a formal 14 15 position description that has been developed for this person? 16 17 MR. HILL: Yes, there has been. DR. ELLINGSTAD: Okay. And who did that? 18 MR. HILL: I think Larry Youngblut testified 19 that it was done a couple of years ago, and it was 20 classified, and --21 DR. ELLINGSTAD: But you didn't define what 2.2 these duties will be? 23 24 MR. HILL: No, I did not.

1 DR. ELLINGSTAD: Okay. Did --MR. HILL: It was a national PD that was 2 3 developed and sent to us. DR. ELLINGSTAD: Okay. And, so, you haven't 4 5 specified a specific role that you expect this person, other than it sounds as though you're anxious to have 6 7 someone assessing a variety of data and providing that 8 input to you? MR. HILL: Yes, sir. 9 10 DR. ELLINGSTAD: Okay. Thank you. 11 MR. HAMMERSCHMIDT: Thank you. Are there 12 other questions for this witness? 13 (No response) In that case, Mr. Hill, 14 MR. HAMMERSCHMIDT: 15 we thank you for your participation in this public hearing and your cooperation with our investigation. 16 17 You may stand down. Thank you, sir. 18 MR. HILL: 19 (Whereupon, the witness was excused.) MR. HAMMERSCHMIDT: The next witness is Mr. 20 21 Brad Pearson, who is proceeding to the witness table. 2.2 We welcome you, Mr. Pearson. 23 Whereupon,

BRAD PEARSON

24

1 having been first duly affirmed, was called as a witness herein and was examined and testified as 2 follows: 3 MR. RODRIGUEZ: Please be seated, sir. 4 Interview of Brad Pearson 5 MR. RODRIGUEZ: And please state your full 6 7 name. 8 MR. PEARSON: My name is Bradley Dean 9 Pearson. 10 MR. RODRIGUEZ: And your occupation? 11 MR. PEARSON: I'm the Flight Standards 12 Division Manager for the Northwest Mountain Region. MR. RODRIGUEZ: And what is your business 13 address? 14 15 MR. PEARSON: 1601 Lind Avenue, SW, Renton, Washington 98055. 16 17 MR. RODRIGUEZ: And would you briefly describe your aviation background for us? 18 MR. PEARSON: I have a Bachelor of Science 19 degree in Management. I am the holder of an airline 20 21 transport pilot certificate with airplane single and 2.2 multiengine land ratings. I am type-rated in the 23 Learjet, the Sabreliner, and the DC-9. I worked as an instructor-pilot in those three turbojet aircraft. 24

1 I've also been an instructor in general aviation.

I joined the FAA about 29 years ago, and in 2 approximately 1982, I entered management, and I've had 3 4 the opportunity to hold a number of positions, and 5 three years ago, I was promoted to division manager. 6 MR. RODRIGUEZ: I'm sorry. Was that -- you 7 said three years ago? MR. PEARSON: Yes, sir. Three years ago. 8 9 MR. RODRIGUEZ: Dr. Brenner will question the 10 witness, Mr. Chairman. DR. BRENNER: Good afternoon, Mr. Pearson. 11 12 MR. PEARSON: Good afternoon. DR. BRENNER: I believe you served as a 13 14 senior manager at the Northwest Mountain Regional 15 Office for the last 12 years, the assistant division manager and the division manager, and as the person 16 17 with the longest corporate memory, I would appreciate it if you could give us your views on some events that 18 are in our docket, and that we found in the 19 investigation that occurred in the Certificate 20 21 Management Office during this period. 2.2 The events relate to oversight issues, and 23 we'd very much appreciate your comments to help us put them in perspective in our record. 24

1 In 1991, the principal operations inspector 2 accepted a management job with Alaska Airlines and 3 changed overnight from overseeing the airline to 4 working for it.

5 Are there ethical concerns with this type of 6 transfer?

7 MR. PEARSON: There could have been. His 8 employment ultimately by Alaska Airlines was done 9 legally. My understanding of his situation was that he 10 was invited to participate for a position at Alaska 11 Airlines while he was the principal operations 12 inspector.

He advised his supervisor of that, and they sought appropriate counsel. He recused himself from being the principal operations inspector while under competition and then was hired and subsequently left the FAA.

18 It's my understanding that rather than using 19 the agency counsel, he did seek private counsel. He 20 retained an attorney, and he received a report so that 21 he could understand his restrictions for post-22 employment at Alaska Airlines, and to my knowledge, 23 he's complied with all laws.

24 DR. BRENNER: And how long was the period

1 that he was recused?

2 MR. PEARSON: I understand he was recused until he left the FAA. He took himself out of his 3 4 position, and his supervisor acted as the principal 5 operations inspector. 6 DR. BRENNER: I was wondering how long the 7 period was from the time that he was acting as the 8 inspector until the time that he left the agency to 9 join the airline. 10 MR. PEARSON: I don't know. DR. BRENNER: In 1994, the three permanent 11 12 section supervisors were rotated in their management positions. A similar rotation of the same three 13 managers had occurred earlier, around 1992, and later 14 15 in 2000, following the accident, and the Certificate Management Office was one of the positions involved in 16 17 the rotations. A criticism was made by inspectors that these 18 rotations occurred whenever a manager got in trouble 19 and did not represent an effective form of change. Do 20 you think that's reasonable? 21 MR. PEARSON: No, I really don't. 2.2 The 23 movements in the very early '90s, that would be, by my recollection, the Desert Storm time frame, that 24

occurred because the manager of the office was a highranking Air Force officer in the Reserves, and he was activated, and, so, it necessitated a movement of actually Mr. Hill into his position to be the acting manager, and then, of course, we had a temporary promotion into Mr. Hill's vacant position.

7 About, oh, probably 11 or 12 months later, there was a promotion made of one of the section 8 9 supervisors that later in 1994 was part of the 10 promotion, but the situation in the early '90s was entirely circumstantial, both linked to Desert Storm 11 12 and the Reserve commitment of the manager and also to the addition of a section supervisor position, and 13 14 someone was promoted.

15 In 1994, we had a very serious situation in 16 Seattle FSDO, and it was in the Operations Section, and 17 it was a very disturbing situation, very upsetting to 18 the FSDO, and frankly upsetting to me as well.

We had four security investigations
occurring, and they were for very serious offenses that
I don't imagine we need to discuss here. It did result
in the loss of three employees and an impact on the
fourth one.

24 It had quite an adverse impact on the office.

1 So, in 1994, as the acting division manager, I chose to move the office forward, to get a little less 2 focused on the rumor mill because people did not 3 4 understand what was going on. There was a lot of 5 tension in the office. Seattle FSDO has consistently been a very high-performing office. It's a very large 6 7 complex office as well, and I rotated all of the 8 section supervisors to new positions.

9 It was a turning of the page action, and, so, 10 that's what occurred in 1994, and then the third move 11 that you referred to would be just very recently, and 12 that occurred again just by circumstance. There was a need to have an acting manager. Again Mr. Hill filled 13 that need, and then, when I chose to create the CMO, he 14 15 went over as the acting manager, and the former supervisor of the Alaska CMS left his position. 16

DR. BRENNER: Thank you. In 1994, an evaluation team from FAA Headquarters provided an unfavorable report about the effectiveness of several managers at the Seattle District Office, and these were managers who included some managers that were involved in the rotations and did remain, and the evaluation team recommended personnel actions.

24 How did the regional office respond to this

1 evaluation?

2	MR. PEARSON: It was an impacting report.
3	The evaluation occurred in the latter part of May and,
4	I believe, the first week of June of 1994. The report,
5	which you referred to just now in your question, I
6	obtained a copy of that off of the union bulletin board
7	in June of 1995, and what I noted when I read the
8	report was that we had taken several of the recommended
9	actions, and, of course, you know, that evaluation is
10	almost seven years behind us at this point.
11	DR. BRENNER: In 1996 to '97, history of
12	internal disagreements in the Certificate Management
13	Office between inspectors and management resulted in
14	disciplinary action against several inspectors and the
15	involuntary removal of the principal operations
16	inspector.
17	What's disturbing is that several inspectors
18	reported a belief that the management had an
19	inappropriately-close relationship with Alaska Airlines
20	that discouraged enforcement.
21	Please help us put this period in
22	perspective, especially regarding the relationship of
23	management and the airlines.
24	MR. PEARSON: Okay. I will. Two points

perhaps from your question. First, I, of course, can't
 comment on the nature of any of the personnel matters
 because of the Federal Privacy Act.

When any employee makes an assertion regarding Flight Standards in particular being too close to industry, it goes to the core of the public trust of Flight Standards. I don't think it gets a great deal more serious than that.

I was aware of that concern, and I conducted 9 10 my own investigation into those that appeared to be of 11 concern to the person that was making the assertions. 12 Recognizing, of course, that I, too, could be viewed as biased, I, in writing, requested in May or June of 13 1998, for our Security Division or for the Office of 14 15 Inspector General, and preferably the Office of Inspector General, to do an evaluation of those 16 17 concerns, specifically the concerns that we were too 18 close to Alaska Airlines because they are very serious assertions for Flight Standards. 19

I met with the Security Division Manager, I believe, in May of 1998. Also present was the Agentin-Charge from San Francisco, from the OIG. It was approximately a two-hour meeting, and in that meeting, I attempted to persuade preferably the OIG to get an

1 entirely independent group to do a detailed

investigation of the assertions. They declined because they did not see a criminal linkage to the assertions, and our Security Division also declined to do the investigation. They felt that I had the matter in hand and the tools within my division to deal with the matter, and, so, I was unable to get third party evaluation of the concern.

9 DR. BRENNER: And within this, the principal 10 operations inspector, who was removed, had a history of 11 enforcement that included uncovering a serious training 12 deficiency at the airline that involved falsification 13 of training records.

14 She was actually removed twice, I believe, in 15 1994. She returned through legal action and then was 16 again removed in 1997. Why was she removed?

MR. PEARSON: It's a small point. However,Dr. Brenner, I think I will make it.

We did not remove this employee. What we executed in 1994 and also in 1997 was a managementdirected reassignment. The division manager in 1994 executed a management-redirected reassignment of five or six employees, and the motivation behind that was to improve the capability of the Technical Branch that

1 gives guidance to the field offices.

I have a staff. It's called the Technical Programs Branch. It was a similar staff back in 1994 for the division manager that was there. So, the motivation behind that was to provide better guidance to the field.

7 The POI that you mentioned had expressed an 8 interest in writing to come and work in that branch. 9 Later, she recanted that, prior to the directed 10 reassignment. Nonetheless, she, along with the other 11 employees, were identified for movements. Some would 12 be joining the regional office, some would be leaving, 13 and it was transacted.

14 It was a good management decision. However, 15 it was not contemporary. The consequence of that 16 action was that the former POI protested, which is 17 fine. We absolutely encourage that in the FAA. We are 18 most interested in employees utilizing protest venues.

19 The Director of Flight Standards was unaware 20 of what the division manager had done and was a bit 21 surprised by the approach taken and was not, I'll put 22 it this way, supportive or perhaps not at all 23 supportive of the process that had been used, not so 24 much the content of what had happened.

The other outgrowth of this was that the
 former principal operations inspector was very
 adversely affected by the move. She did not want it.

4 At this point, and we're talking about a 5 month after the reassignments had occurred, the 6 division manager had retired, and I was the acting 7 division manager. So, what I chose to do for all 8 affected employees was to give them the opportunity to go back to the position from which they had come, and 9 10 the only employee that took that option was the former 11 POI, and she returned to her position.

And in 1997, there was also a reassignment, and I cannot get into the details of that, as I mentioned. I will say that there was a grievance filed. I can say that, and the grievance was arbitrated, and the FAA was upheld by the arbitrator, and that is a publicly-available document.

DR. BRENNER: Good. Thank you. In 1998, a mechanic at the Oakland Maintenance Facility contacted law enforcement authorities about possible violations in the maintenance practices at the Oakland facility. This led to a grand jury investigation that's on-going. Were you aware, either through the FAA hotline or through surveillance, of any problems at the

1 Oakland facility?

MR. PEARSON: No, I was not. 2 DR. BRENNER: Did you modify your 3 surveillance as a result of this development? 4 5 MR. PEARSON: If you're referring to the search warrant that was served at the Oakland facility 6 7 in December 1998 -- is that what you're asking me? DR. BRENNER: I think I'm asking about the 8 9 general legal activity that was involved then. The 10 allegations that would have been serious enough to 11 begin legal action. MR. PEARSON: Well, let me address it then 12 from December of 1998. There was certainly a public 13 awareness of this matter in December of 1998. 14 The 15 Flight Standards Division in Seattle was not in the fold in this matter. This is a criminal investigation. 16 17 It obviously drew my attention, and the assistant division manager's attention, who, 18 incidentally, has an airworthiness maintenance 19 background, and we made contact with Seattle FSDO, and 20 in the Seattle FSDO is the Alaska Airlines Certificate 21 Management Section at that time, and we directed that 2.2 23 section to maintain contact, close contact with the Office of Inspector General. 24

1 There's a standing policy between the FAA and 2 the Office of Inspector General that should the OIG 3 discover any unsafe condition during a criminal 4 investigation, they will advise FAA.

5 Those contacts were made, as Mr. Hill alluded 6 during his testimony, and throughout calendar year 7 1999, there was no unsafe condition that existed that 8 the OIG passed to us. They had no information to pass 9 to us of that type.

10 As Mr. Hill indicated, however, that was not 11 going to be satisfactory. So, the CMS executed with, 12 in my opinion, the correct tempo an investigation, 13 heightened surveillance activity, of their own of the 14 Oakland facility, and as you mentioned, the first 15 activity would have been in February.

16 Two inspectors went to Oakland, and they 17 interviewed 10 Alaska Airlines employees that worked at 18 the Oakland Maintenance Base, and, incidentally, at 19 Oakland, we also had the ATOS Geographic Inspector for 20 Maintenance, and, so, he also was available and present 21 for some of these activities.

There were no irregularities noted from the cross-section of personnel interviewed. What was chosen as the next step in the process was to send two

inspectors down to, I believe, Oakland or they might
 have gone to the Seattle Records Room. I did hear Mr.
 Hill say go to Oakland, and my memory might not be
 quite as good as his.

5 The objective of that was for them to do a 6 close review of the MD-80 records because these would 7 be airplanes that had gone through the Oakland facility 8 because we, of course, were seeking to understand what 9 is the problem here, because we do not know what the 10 criminal investigation is about even today, and they 11 did not find any irregularities in the records review.

12 There were three legal cases that, in, I 13 believe it was, approximately the Spring of 1999, 14 reached the point of a proposed notice for penalty 15 going to the airman, proposing revocation. These are 16 all falsification cases. These are for three Alaska 17 Airlines employees.

18 The principal maintenance inspector traveled 19 to California. He attended the informal conferences. 20 This is a process that occurs in a non-emergency 21 adjudication, and he returned without a great deal of 22 additional information. He did conclude, however, that 23 with what he interpreted from the cases, it was not a 24 systemic issue. He did not see a path for development

of an in-depth inspection or anything of that type. He saw them as localized cases, and, similarly, with the single civil penalty case -- this has also been in the media a great deal.

5 It's the one that left the Flight Standards 6 District Office there in Oakland with, I believe, a 7 penalty of about \$8.4 or 5 million and was later 8 reduced by the Flight Standards Regional Staff, I 9 believe it was, to about \$44,000.

He was similarly impressed that that was not indicative of anything but a single event noncompliance.

I met with the principal maintenance inspector and his supervisor and manager in July of 15 1999. We discussed the situation in Oakland, and he did not see the situation in Oakland with the data that 17 we had as something that caused him to want to do an 18 in-depth inspection or anything exceptional.

DR. BRENNER: Okay. Thank you. In 1999, the new ATOS Surveillance Program was implemented. During the first year, we had testimony that the Alaska Airlines certificate completed a low percentage of its planned EPI inspections compared to other ATOS certificates.

1 Can you tell us what happened that first year? Can you explain that, what was going on? 2 MR. PEARSON: I can certainly give you my 3 4 observations, and I think the point that has to be 5 borne in mind here is that ATOS is a new program, and I 6 went to the same training as the inspectors and the 7 supervisors and the managers. I left that training in November of 1998 very motivated. 8

9 I felt that I had sufficient knowledge that I 10 was probably at the application level. I felt that I 11 could plan a CSP. So, I thought the training was 12 effective.

I had contact with the supervisor of the 13 Alaska Airlines Certificate Management Section, CMS, 14 15 and I had this contact through the Summer, at which point, in the Summer of 1999, because the supervisor 16 17 was forwarding these summary reports of ATOS performance, I began prodding the supervisor a bit 18 because my orientation is from the old event-based 19 system, that, you know, I was feeling as though we 20 21 needed to be getting more accomplished, and he reminded 2.2 me that, you know, this is a different program. 23 It's not, you know, a concept to do a hundred

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percent, and the guidance that he pointed out to me

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they were getting from the National ATOS Office, and there was very good support from the National ATOS Office in terms of telecons and staying linked to the 10 CMOs that were in ATOS that first year, was that the focus should be on the SAIs, and that that's where they needed to be, and that this was, you know, a beginning year.

8 And, so, I heard that and probably it would have been around August of 1999, I had contact with him 9 10 again, and, you know, I essentially told him, look, you 11 know, I'm feeling like if this is more than we thought 12 it was going to be, and bear in mind, I think, in this eight-month period, we're all learning about ATOS 13 because none of us had ever done it before, and in 14 15 fact, I've never really done it. I've been to training, and I've read a lot about it. I've talked to 16 17 people.

But what I indicated to him is let me know what you need position-wise, and I'll be as responsive as I can be, and, so, he said that they had a plan to go ahead there in their CMS and review it, and they did, and he sent a memo to me about a month and a half later, perhaps even a bit more than that, I think it was actually November, asking for some positions, and I

1 gave him three positions upon receipt of the memo.

2 DR. BRENNER: Among the surveillance that was 3 accomplished, did the surveillance identify any 4 negative findings?

5 MR. PEARSON: There are some that I've seen 6 that were negative findings. However, those are 7 records I have seen subsequent to the accident.

8 My position is that of division manager, and 9 I want to explain a bit of structure here because I 10 think it might help explain my role here and perhaps 11 also my ignorance of those specific records.

I have seven states in the Northwest Mountain Region for which I'm responsible, and I have nearly 400 people that work in the Flight Standards Division and do our mission work, and our mission is very broad and large, both in scope and in workload.

17 I have 10 Flight Standards District Offices 18 where virtually all of these employees work, and in 19 each of those offices, there's a manager, and there are 20 supervisors in all but one of those offices.

The accountability in terms of being aware of and achieving mission is in the FSDO. It would not be a normal protocol for me on Alaska Airlines or any of the other 225 air carrier certificates that are in our

region, it would not be a normal activity for me to try
 to drill down and keep up with records. It would not
 be possible nor do I have staff that can do this.

The quality assurance process in Flight Standards is in the FSDO. So, I'm anticipating that as they gain the experience in the CMS with the new ATOS data repository and software, that they were reviewing the surveillance records that were input as they achieved the SAIs, and they achieved the EPIs and were aware of the comments.

DR. BRENNER: And among the 225 certificates you mentioned, were there any other ATOS certificates? MR. PEARSON: No. This is our only ATOS carrier in Northwest Mountain Region.

DR. BRENNER: The principal maintenance inspector from that period and the office manager from that period indicated a belief that the demands of the new ATOS Program was causing a deterioration in oversight, and both indicated that they raised concerns widely in the FAA.

Did you -- is that your recollection or did you hear of any concerns from them during that period? MR. PEARSON: You're referring to the office manager of the FSDO?

1 DR. BRENNER: Of -- no. Phil Hoy and Mike Hubbard, the CMO manager and the PMI from that period. 2 MR. PEARSON: I understood subsequent to Mr. 3 4 Hubbard's retirement that he had issues with ATOS, and 5 I don't recall Mr. Hoy ever raising an issue regarding 6 ATOS. 7 DR. BRENNER: After the accident, in March 8 2000, there was apparently -- there were apparently discussions between FAA and the airline about a 9 10 possible SAT audit that would use self-disclosure. 11 Your name has come up in those connections. 12 I'd appreciate it if you could tell me your recollections of those discussions. 13 14 MR. PEARSON: Yes. It has come up, and it 15 should. On February 23rd, approximately, I was in a meeting with Phil Hoy, and also in the meeting was the 16 division manager of AFS-300, and we were discussing the 17 energy, I'll put it that way, that was coming 18 principally from the Western Pacific Region. 19 20 However, with no specifics at all in terms of a single specific problem being known. Believe me, we 21 2.2 were trying to seek to understand problems as we had in 23 1999. 24 I was determined to do more than we had done,

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and at the same time, of course, Alaska Airlines is an 1 ATOS carrier, and the processes for ATOS are prescribed 2 3 in an FAA Directive, and, so, what I chose was a tool that was appropriate for what I was interested in 4 5 doing, and that is a system analysis team, and what I was interested in doing, and what I directed Phil Hoy 6 7 to do in that meeting, was to organize a SAT with Alaska Airlines, to go to Oakland and to assess the 8 9 systems that related to the heavy check process at 10 Oakland.

I also indicated to Mr. Hoy that I was 11 12 completely aware that we had no experience in doing SATs, and that I understood from talking to at least 13 one of the other division managers that they'd had some 14 15 experience. So, I referred him to Southwest Region, and one of the CMOs there -- actually two of the CMOs 16 there, because they've got three ATOS carriers in 17 Southwest Region, and suggested that he might be able 18 to learn something from that region, and, so, he was 19 commissioned to organize the SAT, and that is how that 20 21 began.

I think I probably indicated to Mr. Hoy, although I don't specifically remember this, that it was my understanding that in the SAT, provisions of the

agency's decade-old self-disclosure program would fit
 this program.

3 So, I suspect that's probably where he first4 heard that, would have been from me.

5 DR. BRENNER: And I understood that legal 6 counsel was brought in and disagreed with the approach 7 of self-disclosure. Is that accurate?

8 MR. PEARSON: Yes, it is accurate. However, in the context of time, I think that also needs to be 9 10 said. On the one hand, I was the maker of this SAT on 11 approximately February 23rd, and on the other hand, I 12 was the same person that nixed the SAT and broke off of the ATOS protocol all together, and I was the one that 13 recommended that we do something such as an NSI, and 14 15 that is what we ended up doing.

16 The document which prompted our legal counsel 17 to visit with me was a document faxed by an attorney 18 from Alaska Airlines. It wasn't in the Shop Group. It 19 wasn't in the right range. Our attorney objected to 20 the document as well as to the concept of self-21 disclosure with the SAT, and I explained the concept of 22 ATOS.

I also explained to him who in a surveillancemodel under ATOS and under the ATOS directive is

permitted to do surveillance, and, you know, he

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listened to me and understood where I was coming from. 2 I don't know that that meant that he agreed with me. 3 4 DR. BRENNER: Where did the concept of self-5 disclosure as a way of precluding enforcement arise? Did it arise on the airline side or on the FAA side? 6 7 MR. PEARSON: If I might attack the stem of 8 your statement. A SAT -- pardon me. Self-disclosure 9 is a separate program, as Larry Youngblut and Mr. Hill 10 both testified.

11 It does not preclude enforcement under any 12 circumstance. All right. So, there's no escaping 13 enforcement. What occurs under self-disclosure is that 14 a violation that might otherwise constitute what we 15 refer to as legal action -- in the instance of an 16 airline, that would typically mean a civil penalty.

17 Instead of a civil penalty, a letter of 18 correction could be issued after the airline meets 19 specified criteria. The criteria include immediate 20 notification of the FAA after immediately stopping the 21 non-compliant activity. It includes correcting the 22 problem immediately. It includes creating a 23 comprehensive fix to the problem.

24 It includes the FAA reviewing the matter

1 thoroughly and deciding whether or not they will accept the comprehensive fix and also accept the self-2 disclosure as fitting within the near-decade-old 3 4 guidance at this point, and when all of that criteria 5 is met, then the self-disclosure is accepted, and as 6 long as the carrier, in this context, complies with the 7 comprehensive fix and the schedule for the comprehensive fix, the self-disclosure stays together. 8 On the other hand, if the criteria is not met 9 10 or, as Mr. Hill alluded, if there are certain 11 attributes to the non-compliance that cause self-12 disclosure not to be something that can be used, then legal enforcement's pursued, and he gave examples of 13 14 those. 15 Intentional violations. They're not going to be fitting a self-disclosure. A lack of qualification. 16 17 That's not going to fit it either. So, there is a very structured program here, 18 but I want to preclude the notion that I'm afraid is 19 getting built that self-disclosures eliminate 20 enforcement, and I also want to delink the concept that 21 2.2 a SAT is somehow having within it the creation of the 23 self-disclosure program. 24 The self-disclosure program, as Mr. Hill

pointed out, was developed in 1990, and the motivation 1 for the agency to do that was that we recognized that 2 it is not possible, with the staffing resources of 3 4 Flight Standards that we will ever have, that we will 5 have enough inspectors to watch every activity and air 6 carriers, other types of air operators, as well as the 7 air agencies that support the air operators and the 8 airmen that are in our country's aviation system.

9 And, so, the concept is one that is really 10 very much from the Federal Aviation Act, and that is, 11 that at all times, certificate holders are responsible 12 for being fully compliant with the regulations.

Part of that should involve a certificate holder that is prudent, having a healthy self-audit program, so that they're checking for their own system faults and their own non-compliance, and, so, the selfdisclosure program you can view as a motivation for certificate holders to invest in self-audit programs, and, so, that's the history behind it.

The other thing, while I'm on a roll here, that I think needs to be understood is that I as a senior FAA manager, I don't have a checkbook which I write out and say you're going to get a selfdisclosure, but you're not as a form of reward, as a

form of encouragement. That's not the way we work in
 the FAA.

The concept of the self-disclosure program 3 4 has had a great deal of Federal Government process, and 5 if an entity meets the criteria for a self-disclosure, 6 then they are going to be able to self-disclose, and in 7 the instance of a SAT, that criteria is met, unless any of the precluding items that I discussed prevent it 8 9 from being used, and I appreciate you allowing me to go 10 on uninterrupted.

11 DR. BRENNER: Sure. Of course. Mr. Pearson, 12 my understanding was that there was a meeting early in the discussions where the FAA counsel's advice was 13 sought. FAA counsel advised against the self-14 15 disclosure approach because he felt it was 16 inappropriate, given the accident and the legal 17 activities going on in Oakland, and recommended enforcement action, and that at that meeting, you 18 overruled him and directed your managers to proceed and 19 contact the airline about this possibility. 20 21 Is that understanding correct or incorrect? 2.2 MR. PEARSON: Well, the time context, I

24 because by the time the attorney became involved, it

think, is a little bit off on that, Dr. Brenner,

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was only a matter of a day or two before I nixed the
 SAT all together, and we waived off of it.

However, the point that you're making that I stuck with the SAT, it is a correct one, and I think what we need to bear in mind here is that throughout 1999 and certainly post-accident, we had numerous contacts with the Office of Inspector General and our inspector that was down at Oakland.

9 I mean, we were very, very busy during 10 particularly calendar year 2000, but we were very 11 prudent, and in calendar year 1999. There wasn't any 12 information indicating a definable problem that would 13 have caused us to spawn an in-depth compliance-based 14 inspection and break away from the directive guiding 15 the ATOS Program.

16 So, I think it's important to remember that, 17 and that is what guided my continued pursuit of the 18 SAT.

What caused the SAT to go out the door with me was when I received from Bob Hill a copy of the petition which had been given to Bob Hill by Alaska Airlines, which had been signed by the 64 mechanics at the Seattle Maintenance Base.

24 That was very moving, and I contacted AFS-1,

and he in turn brought AVR-1 on the teleconference
 relatively late, a Thursday night, and the SAT was
 over, and an NSI was on its way, and we all unanimously
 agreed that was the way to do that.

5 DR. BRENNER: Thank you. And in April 2000, 6 the Special Inspection Team did do a special 7 inspection. What did you learn from that inspection? 8 MR. PEARSON: I learned that there were some 9 very serious findings, and the most serious finding for 10 me was the weakness in the Continuing Analysis and 11 Surveillance System or Program.

12 It was not working as it should have been working, and the result of that was that during the 13 14 NSI, even with the FAA present at the Seattle 15 Maintenance Base, and that's where Boeing 737s receive heavy maintenance, and at the Oakland Maintenance Base, 16 and that's where MD-80s receive heavy maintenance, the 17 releases of those aircraft out of their heavy 18 maintenance was not done correctly, and it was very 19 impacting to me, and, of course, I knew this during the 20 inspection because I was kept very apprised of the 21 2.2 progress of it.

It was very impacting to me, that with the knowledge that the FAA was conducting an in-depth

1 inspection, things were not done very well at all.

2 So, the CAS Program was a serious finding, 3 and the outgrowth results of the CAS Program not 4 functioning well was that the heavy check program was 5 not performing well, and the General Maintenance Manual 6 was not being used and was not a tool as it is required 7 to be by regulations.

I believe it was brought up by Mr. Whitaker, 8 the PMI, that the significance of the CAS Program is 9 10 that this is the carrier's program to measure the 11 effectiveness of its Comprehensive Airworthiness 12 Maintenance Program, and that would include the General Maintenance Manual. That would include making certain 13 that employees are utilizing the procedures in the 14 15 General Maintenance Manual.

16 The procedures for release of an aircraft 17 from heavy check are contained in that manual. So, I 18 was quite concerned with the results of that NSI 19 report.

20 DR. BRENNER: Why did FAA oversight of Alaska 21 Airlines before the accident fail to detect these 22 deficiencies?

23 MR. PEARSON: I don't know specifically the 24 answer to that. It's a point obviously I've given

substantial thought. The former PMI for Alaska

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Airlines, from my point of view, was a very stand-up
PMI, not afraid of anything, and if he saw a problem,
he was going to go for it.

5 The conclusion I've drawn, and I've not 6 talked with him about this, is that he did not see the 7 CAS Program as a problem or I think he would have gone for it, and there's always a great deal of work for the 8 We do not survey every single item. 9 FAA. This is a 10 core program, and he apparently did not see a problem 11 with it or I'm very confident he would have put great 12 energy into correcting that program.

DR. BRENNER: And up to the accident, you mentioned that you had a manager in your office with maintenance background. Could you just help me out on the manager's background, and when?

MR. PEARSON: Well, again I'm a division manager, and, so, I work in a regional office, and we've got 10 Flight Standards District Offices, and that's where the vast majority of the division's employees work, and that's where the actual mission work occurs.

23 The person to whom I referred was the24 assistant division manager. So, she's my immediate

1 assistant. When I'm not present and at work, she's the acting division manager. So, she would not be a hands-2 on airworthiness manager at the field office level. 3 4 DR. BRENNER: What is her background in 5 maintenance? 6 MR. PEARSON: Heavy airplanes, heavy 7 maintenance. I believe it was related to C-141 maintenance in the Air Force. 8 9 DR. BRENNER: And also within your management 10 group that would have authority over the CMO, any 11 managers from an airline background? 12 MR. PEARSON: Could you repeat the question? DR. BRENNER: Any managers from an airline 13 background in your office that had authority over the 14 15 CMO, Certificate Management Office, at the Seattle 16 FSDO? 17 MR. PEARSON: What time frame are we 18 referring to? DR. BRENNER: The period before the accident. 19 MR. PEARSON: Airline background as in former 20 21 airline employee, there wasn't anyone. 2.2 DR. BRENNER: Okay. Thank you, Mr. Pearson. 23 I appreciate very much your assistance. That completes my questions. 24

1 MR. HAMMERSCHMIDT: Thank you, Dr. Brenner. Mr. Rodriguez, do you have some more questions? 2 MR. RODRIGUEZ: No questions, sir. 3 4 MR. HAMMERSCHMIDT: Very well. At this 5 point, we will go to the Parties to the public hearing 6 for their questions, beginning with Alaska Airlines. 7 CAPTAIN FINAN: No questions, Mr. Chairman. 8 MR. HAMMERSCHMIDT: Thank you, Captain Finan. Boeing? 9 10 MR. HINDERBERGER: We have no questions, Mr. 11 Chairman. 12 MR. HAMMERSCHMIDT: Thank you. Aircraft Mechanics Fraternal Association? 13 MR. PATRICK: Mr. Chairman, our questions 14 15 have been addressed. Thank you. MR. HAMMERSCHMIDT: Thank you, Mr. Patrick. 16 Air Line Pilots Association? 17 CAPTAIN WOLF: Thank you, Mr. Chairman. 18 You mentioned that as part of the FAA Surveillance Program, 19 not all items are reviewed. Therefore, either the CAS 20 21 Program was not reviewed by the POI or it was reviewed 2.2 but no problem was noted. 23 How does the FAA program determine what areas to review then? 2.4

1 MR. PEARSON: If I might ask for a clarification, what time frame are we talking here? 2 Are we talking under the event-based surveillance 3 program or under ATOS? 4 5 CAPTAIN WOLF: Under the event-based. 6 MR. PEARSON: Under event-based surveillance, 7 inspectors are given latitude for the nature of the job function which they go out and perform with respect to 8 what they view. 9 10 CAPTAIN WOLF: Do you on a regular basis have 11 discussions with the upper-level management at Alaska 12 or is it just cursory type of discussions? MR. PEARSON: Prior to the accident, it was 13 at best cursory for me. Since the accident, I've been 14 15 involved in the delivery of a proposal to change operation specifications, and the subsequent Alaska 16 17 Airlines Safety Panel Gate Meetings, and that's an FAA 18 panel, and I chair that panel. As Mr. Hill indicated, Alaska Airlines 19 executives come to a portion of that meeting to update 20 us on their action plan progress, and, so, those are 21 the meetings which I've had with Alaska Airlines 2.2 23 executives. 24 CAPTAIN WOLF: And have you ever received any

complaints from Alaska management regarding inspectors
 assigned to a certificate?

3 MR. PEARSON: There have been two complaints 4 that I can recall, and they would be fairly old at this 5 point. One is, I think, pushing four years, and the 6 other's pushing five years old.

7 CAPTAIN WOLF: Okay. Thank you, Mr. Pearson.8 No further questions.

9 MR. HAMMERSCHMIDT: Thank you, Captain Wolf.
10 Federal Aviation Administration?

11 MR. DONNER: No questions. Thank you.

12 MR. HAMMERSCHMIDT: Thank you. Thank you,

13 Mr. Donner. Mr. Berman?

14 MR. BERMAN: Thank you. Hello, Mr. Pearson.15 MR. PEARSON: Hello.

MR. BERMAN: I know we've talked extensively about the findings of surveillance in '98 and '99 at Alaska Airlines. I'd like to ask you, though, what specifically did the SAIs conducted under ATOS reveal about Alaska's maintenance systems in that period? MR. PEARSON: I don't have that degree of

22 familiarity with the completed SAIs.

23 MR. BERMAN: Okay. I guess since I've been 24 asking this to everybody, and now we're up near the top

of the chain, so maybe I'll ask Mr. Donner if he could
 provide it to us. I'll ask Mr. Lacey.

Let's see. If you -- if there had been major findings, do you think that that is something that would have been brought to your attention or should have been brought to your attention as the -- as major findings with the only major air carrier that your office handles?

9 MR. PEARSON: Well, major findings with any 10 of our certificates, I would expect to be brought to my 11 attention.

12 MR. BERMAN: Okay. Regarding the NSI, the 13 National Safety Inspection, at Alaska, why was that 14 initiated?

15 MR. PEARSON: There was a petition signed by most or perhaps all of the mechanics employed either on 16 17 a shift or perhaps all shifts at the Seattle Maintenance Base. I don't know the demographics of 18 those that exactly signed the petition, but the point 19 I'm attempting to make is that a large number of 20 mechanics signed the petition complaining about the 21 2.2 supervision and the pressures they were perceiving in 23 their work place, and I considered it to be remarkable. 24 MR. BERMAN: What was the implementation of

1 the NSI's relationship to the accident?

2	MR. PEARSON: I don't really know that I
3	would draw an immediate nexus to the accident; that is,
4	I wouldn't want to be portrayed as correlating accident
5	equals NSI. That wasn't really what transpired.
6	The catalyst event, which was most persuasive
7	to me that we needed to break out of the directive
8	linking ATOS to Alaska Airlines and revert back to a
9	compliance-based method of surveillance, where I could
10	then utilize unlimited number of resources, was that
11	petition.
12	MR. BERMAN: So, the petition made you think
13	that, but none of the concerns from '98 and '99 made
14	you think that?
15	MR. PEARSON: Well, the concerns from 1998,
16	specifically the serving of the search warrant by the
17	FBI in December of 1998, and then the subsequent
18	activities that we pursued in 1999, those were
19	certainly items that were in our consciousness.
20	At the same time, though, as we've
21	emphasized, both Mr. Hill and I, there were no findings
22	from either our pursuit with the OIG or our own
23	surveillance/investigation activities.
24	So, while it was in our consciousness, and

I'm sure, you know, it weighed to some degree in my mind to decide to do an NSI, the thing that consciously equated to a compliance-based in-depth inspection was that petition.

5 MR. BERMAN: It's interesting. Other 6 witnesses described these concerns from the years 7 before the accident as what sounded like systemic 8 problems within the Oakland Base, Oakland Base, Seattle 9 Base, but you didn't perceive them as systemic problems 10 in the Oakland Base?

MR. PEARSON: I don't think I tracked what you said to me.

MR. BERMAN: You didn't perceive systemic
problems in the Oakland Maintenance Base in 1998 and
'99?

MR. PEARSON: The principal maintenance
inspector did not perceive systemic problems at the
Oakland Base.

MR. BERMAN: Okay. Tell me a little bit about the NSI, something that I wasn't familiar with. I knew NASEPs and RASEPs in your compliance-type program, and I heard those were suspended or eliminated under ATOS.

24 What's an NSI, and where did it come from?

1 MR. PEARSON: Well, our director, shortly 2 after he joined Flight Standards, was interested in 3 trying an in-depth inspection, other than a NASEP, 4 because while a NASEP does have many positive 5 attributes, it is not by any means a perfect in-depth 6 inspection, and there's certainly some problems that it 7 carries with it.

The first experience that we had in Northwest 8 9 Mountain Region with an in-depth inspection, which was 10 nationally led and not a NASEP, involved a very, very large repair station, and the concept that we decided 11 12 to employ that was different was to involve those that have expertise in the certificate and are going to have 13 to receive the results of the in-depth inspection and 14 15 understand the results of the in-depth inspection, so that corrective measures could be done, and, so, what 16 17 we did is we went ahead, and we constructed a team for this first in-depth inspection of this large 18 maintenance vendor. 19

It was a repair station, and we included the certificate personnel, and I think there were five or six of them, and we brought in an equal number or perhaps even a bit more than that of other inspectors from other locations that had the right expertise to

1 contribute to the in-depth inspection.

2	It was a very successful in-depth inspection
3	because the inspectors that ultimately received the
4	report and needed to understand what wasn't working
5	better than they did before the in-depth inspection,
6	they were part of it all the way.
7	The lingering concern that I think that could
8	be there when we look at something like that, that of
9	let's get a totally sterile third party, it did not
10	emerge as a problem in that in-depth inspection, and it
11	didn't seem to emerge as a problem in the NSI either.
12	MR. BERMAN: And when you spoke of the
13	director coming into Flight Standards, was that Mr.
14	Lacey?
15	MR. PEARSON: Yes, it is Mr. Lacey.
16	MR. BERMAN: Okay. I wanted to make sure I
17	understood.
18	MR. PEARSON: Hm-hmm.
19	MR. BERMAN: How was the method the NSI
20	chosen, and who chose it?
21	MR. PEARSON: The method that was chosen was
22	chosen by Inspector Ed Hugg. He works for AFS-40, and
23	he organized the actual inspection plan with the
24	assistance of the inspectors in Seattle.

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1 MR. BERMAN: And I think that Mr. Hill mentioned that since the accident, probably after the 2 NSI, there's been a local level of -- local activity 3 4 that sort of mirrored the National Safety Inspections, 5 the ones that were done on the other nine major 6 carriers, is that correct? Do you know about that? 7 MR. PEARSON: I don't know that I'm tracking 8 what you're referencing. I'm quite familiar, though, with the activities of the CMO at this point. 9 10 MR. BERMAN: Okay. The -- I have trouble 11 with all the names, but the special inspections that 12 were called down on the other nine major air carriers, are you familiar with those? 13 14 MR. PEARSON: Only generally. 15 MR. BERMAN: Okay. He mentioned that there was a similar orientation, a similar type of activity, 16 17 method of surveillance, that they were working on down 18 in the CMO. Have you heard about that? MR. PEARSON: What's occurring at the CMO 19 after the NSI is the surveillance that I think has been 20 discussed, and that's some ATOS surveillance, a great 21 2.2 deal of event-based PTRS-related surveillance, and what 23 we're calling focused inspections on specific parts of Alaska Airlines, such as operational control. 24

1 MR. BERMAN: Okay. We've had testimony that 2 the maintenance manual written procedures were 3 deficient, in addition to the CAS Program issues that 4 you've already mentioned.

5 Can you tell us what your knowledge is of the 6 maintenance manual procedures, and how that's come to 7 your attention?

8 MR. PEARSON: My attention was drawn to the 9 maintenance manual problems as a consequence of the 10 NSI. So, that's how my awareness of the deficiencies 11 in the maintenance manual came to light.

12 MR. BERMAN: And why don't you think that set 13 of deficiencies wasn't detected prior to the NSI?

MR. PEARSON: Similar to the CAS Program, I've pondered that considerably as well, and I think it's probably for the same reason, Mr. Berman. I don't think that the principal maintenance inspector saw it as a problem.

19 Certainly the PMI as an individual would not20 have walked away from it, if he did.

21 MR. BERMAN: That one surprised me a little 22 bit because it seems like the review and approval of 23 the manual is the heart of the traditional surveillance 24 or the basis or underpinning of it. Is that a fair

1 statement?

2 MR. PEARSON: Well, I think it is a fair statement, that manual review is a very routine job 3 4 function under the event-based method of surveillance. 5 MR. BERMAN: And yet this wasn't an adequate 6 manual? 7 MR. PEARSON: The procedures that were being 8 used by employees were not the same as the procedures that were in the manual, and as such, there was a 9 10 problem. Either the employees needed to follow the 11 manual's procedures or the procedures needed to be 12 changed, so that they correlated to what the employees were doing. 13 MR. BERMAN: And I think, also, if I'm -- I 14 15 hope I'm not mischaracterizing it, and people from the FAA correct me. What you just described, I think, is 16 17 the heart of ATOS or at least the safety attribute 18 inspection, where you compare what the written procedures are with the -- what's really happening. I 19 think that's the heart of all of ATOS, I quess. 20 MR. PEARSON: Well, I don't know if it's the 21 heart of ATOS, but in the element --2.2 23 MR. BERMAN: Maybe it's --MR. PEARSON: -- performance inspections, --24

1 MR. BERMAN: -- the kidney. I don't know. MR. PEARSON: Yeah. 2 MR. BERMAN: Sorry. Go ahead. 3 4 MR. PEARSON: But in the element performance 5 inspections, the inspectors do go out to make certain 6 that the procedures and the controls and the process 7 measures are working. The procedures themselves, when they're drawn 8 up under the ATOS model, those are drawn up utilizing 9 10 the safety attributes in the procedure itself. 11 MR. BERMAN: And it just didn't get picked up 12 in whatever ATOS activities were going on? MR. PEARSON: No, it didn't get picked up. 13 14 MR. BERMAN: I know you expressed concern, 15 and I appreciate your candor. You said you were concerned that the ATOS and the other preceding 16 17 surveillance didn't pick up the problems that later came out of the NSI. I appreciate that. 18 What do you recommend, based on looking at 19 that situation? What do you recommend now for the 20 future for Alaska Airlines and the other air carriers? 21 2.2 MR. PEARSON: I recommend that we stay with 23 the system safety approach for the country's air transportation system. I think we're in the infancy of 24

this. I think for our system, our country's system, for the FAA as the safety regulator to be able to deliver the levels of safety that are going to be demanded by the amount of commercial aviation that's going to exist in the next 10 to 15 years, there has to be a different approach taken.

7 It is not going to be turnkey, either in the FAA, in my opinion, or in industry. I think a point 8 that has to be remembered is that it won't be a one-9 10 sided equation. It's not going to work for the FAA to 11 be doing system safety-based surveillance if the 12 airline that is being regulated is locked into only what the regulations require and only a compliance-13 14 based approach. That won't work.

15 The concept here is for industry to adopt system safety as their property for the way they run 16 their airlines in this instance, and it will, of 17 18 course, expand to the other segments of the aviation system, and that's what needs to happen for system 19 safety to deliver a yield in terms of safety, is that 20 the organizations that actually operate the aircraft or 21 2.2 maintain them have to have system safety built into 23 their companies.

24 MR. BERMAN: I know that this situation was

one of the things that's prompted a review of ATOS, and
 we'll be talking about that with the next witness.
 I've got the special -- the report of that special
 project here.

5 Has there been any effort through your office 6 to back track and review why ATOS didn't pick up these 7 systemic problems at Alaska, CAS and maintenance 8 manual?

9 MR. PEARSON: No, and, of course, there's a 10 reason for that. ATOS is a system safety-based method 11 of surveillance. It's very new. The expertise for 12 ATOS in the regional office is minimal because we 13 aren't doing ATOS. We're doing event-based 14 surveillance that most of us grew up with.

The expertise as far as ATOS is concerned in our region, and other regions are the same way, it's in the CMOs. These are the employees that have grown up with ATOS in about a two-year period now. They're the ones that have been connected to the National ATOS Office. That is where the expertise is.

21 So, the evaluations of ATOS that have 22 occurred and most likely will occur in the future for 23 some time will be done at a national level because 24 there isn't sufficient expertise outside the CMO to do

1 a good evaluation.

2 MR. BERMAN: Okay. Thank you. That's all I 3 have. 4 MR. HAMMERSCHMIDT: Thank you, Mr. Berman. Mr. Clark, any questions? 5 6 MR. CLARK: Just following along on the last 7 question, if the CMO has the expertise or what expertise is available now, when is your system going 8 9 to be up and running? 10 MR. PEARSON: Right now, as you heard Mr. Hill say, we have 27 employees, and we'll shortly have 11 12 30, plus 10 geographic employees, which will put us at 13 40. Once those employees are ATOS-qualified, and 14 15 that's not immediately in front of us, that's probably going to take us through a pretty good chunk of the 16 calendar year to have these employees ATOS-gualified, 17 we'll examine whether or not we're going to sever the 18 augmented surveillance and go full-blown ATOS. 19 20 I think we're going to have sufficient staff to do ATOS with how we're presently postured. 21 Ι estimate a decision point probably in about 18 months, 2.2 23 and we'll be deciding then whether or not we're going to go totally ATOS. 24

1 MR. CLARK: Okay. Thank you. MR. HAMMERSCHMIDT: Are there any other 2 questions for this witness? 3 4 (No response) 5 MR. HAMMERSCHMIDT: In that case, Mr. 6 Pearson, let me thank you for your participation in 7 this public hearing and for your cooperation with our investigation. 8 9 Thank you. MR. PEARSON: 10 MR. HAMMERSCHMIDT: You may stand down. (Whereupon, the witness was excused.) 11 12 MR. HAMMERSCHMIDT: We are at the point where we have only one more witness to hear from at this 13 hearing. Given the fact that we've been going here for 14 15 quite awhile, since our last break, I would suggest we take about a -- let's take a 10-minute break and return 16 17 to hear what Mr. Nick Lacey has to tell us. We'll return at 6:32. 18 19 (Whereupon, a recess was taken.) MR. HAMMERSCHMIDT: The final witness of the 20 hearing, Mr. Nick Lacey, is now at the witness table. 21 Mr. Rodriguez, would you please proceed? 2.2 23 MR. RODRIGUEZ: Yes, sir. 24 Whereupon,

1 NICK LACEY 2 having been first duly affirmed, was called as a witness herein and was examined and testified as 3 follows: 4 5 MR. RODRIGUEZ: Please be seated, sir. Interview of Nick Lacey 6 7 MR. RODRIGUEZ: And would you give us your full name, sir? 8 9 MR. LACEY: My full name is Lawrence Nicholas 10 Lacey. MR. RODRIGUEZ: And your occupation? 11 12 MR. LACEY: I'm the Director of Flight Standards at the Federal Aviation Administration. 13 MR. RODRIGUEZ: And the address? 14 15 MR. LACEY: Is 800 Independence Avenue, Washington, D.C. 16 20591. 17 MR. RODRIGUEZ: Thank you. And would you give us a brief summary of your aviation background, 18 sir? 19 MR. LACEY: Yes, sir. I've been in aviation 20 for 32 years, started in aviation with the United 21 States Air Force and basically stationed at McCord Air 2.2 23 Force Base in Tacoma, Washington, went through various flight positions there, you know, aircraft commander, 24

1 instructor pilot, flight examiner.

From there, I was assigned to the Special Air Missions Unit here at Andrews Air Force Base, which is a VIP Unit responsible for carrying heads of state, went through all flight positions in that particular assignment.

Following that, I was the Operations Officer
for a DC-9 Unit in an Aeromedical Configuration in the
Philippines, responsible for air medical evacuation in
the Pacific Theater.

11 After that, I was assigned to Headquarters of 12 the Military Lift Command, to establish a safety 13 inspection and analysis program for the Department of 14 Defense, to oversee the airlines and air operators that 15 had contracts with the Department of Defense.

Later went back to Andrews as a commander, 16 17 commanded the unit that was responsible for Air Force One and other head-of-state travel. Following that, I 18 was assigned as the Program Officer for the -- what's 19 called the Civil Reserve Air Fleet, which essentially 20 oversees the airline industry, in terms -- in times of 21 2.2 national need, when it may be needed to meet national 23 emergency, ran that program for a couple of years, participated on the National Airline Commission in 24

1992, which essentially set the direction for the last
 eight years in terms of the Administration's policy
 towards this industry back at that time. The industry
 as a whole was in dire financial straits.

5 Retired from the Air Force in 1994, went to 6 an airline based up in New York, operating 747s and 7 scheduled charter and all cargo configurations on a 8 global basis, was responsible for both flight and ground operations there, left that after two and a half 9 10 years, established my own company in consulting, was 11 involved in start-ups, several start-up airlines, both 12 here in the United States and in the Far East, and then accepted an appointment in January of 1999 as the 13 Director of FAA Flight Standards. 14

MR. RODRIGUEZ: The DoD safety position that you mentioned quite earlier, what time frame was that, and is that affiliated with the surveys that are still being done out of Scott Air Force Base?

MR. LACEY: Yes, sir. They are. That office
was established following the crash of an Aero Air DC-8
up in Gander. You might remember that.

22 MR. RODRIGUEZ: Yes, sir.

23 MR. LACEY: Very tragic event. It was felt 24 that the Department of Defense had expertise in the

1 safety arena and should establish a program to

2 basically oversee that. I stood that problem -- that 3 program up. It still is in effect and still performs 4 safety audits and analysis of all Defense contractors. 5 MR. RODRIGUEZ: Dr. Brenner will question the 6 witness, Mr. Chairman.

DR. BRENNER: Good evening, Mr. Lacey. After
the accident, the FAA conducted a special inspection of
Alaska Airlines with the National Inspection Team.

10 What did you learn from the inspection?

11 MR. LACEY: We learned from the inspection, 12 and I think Mr. Pearson covered that fairly well, but I was staggered at the results of that inspection that 13 14 showed that there were broad and systemic problems in 15 the company's Continuous Analysis and Surveillance Program related possibly -- covering, you know, the 16 17 Reliability Program, compliance with manuals, and it all seemed to really focus on the aircrafts in hangar 18 or the airlines in hangar maintenance programs. 19

You know, if you want me to expand a little bit on the immediate actions taken after that, I mean, certainly we -- at the national level, at my level, had actually two thoughts, and the question's been asked over and over again here, you know. First, how could

1 this be? What in our current processes? What in 2 current airline practices are there that would enable 3 this type of situation to exist?

4 The other was certainly taking care of the 5 day-to-day operational safety of Alaska Airlines, which 6 initially resulted in increased surveillance.

7 We went through, you know, several really 8 internal decision reviews on what, you know, options 9 and actions were available to me as the Director of 10 Flight Standards, and as you know, we proposed to 11 modify the operations specifications of Alaska Airline 12 which would have withdrawn their authority to perform 13 heavy maintenance.

14 DR. BRENNER: Why did FAA oversight of Alaska 15 Airlines before the accident fail to detect these 16 deficiencies?

MR. LACEY: Well, you know, we asked that question, and it's a difficult one to answer, and I think we're still learning that. I mean, first, you have to look at the FAA itself, and I would first look at our processes.

What in our process, both in surveillance and other certificate activities, whether it be certification, the new programs, in the licensing and

oversight of personnel, or even on-going investigations
of issues that come up, what led us to not picking that
up?

The same, the airlines' own, you know, licensed cadre, so to speak, -- I mean, after all, there are literally hundreds and thousands of licensed personnel involved in these processes who have a responsibility to that license. Why was not data and concerns flowing up either within the airline or to the agency there, and certainly the airlines' management?

11 It got by all of us, so to speak. I mean, so 12 -- you know, the tack I took was, in my mind was, that we had similar problems in other major airlines. 13 Is this a condition that exists across the nation, and can 14 15 we improve first the process used to oversee and review those airlines, and that resulted in a broader national 16 program review, which we've, you know, mentioned from 17 time to time here. 18

DR. BRENNER: Okay. The evidence of the investigation suggests that the Certificate Management Office for Alaska Airlines explored the possibility, following the accident, of conducting a safety audit in conjunction with the airline that might minimize enforcement action through the use of self-disclosure.

Do you feel that this would have been an appropriate response by the FAA?

MR. LACEY: It's -- that type of approach, 3 4 Dr. Brenner, and let me say, is certainly a type of 5 approach that can lead to the resolution of problems, 6 and it is not intended to be part of inspections or 7 post-accident investigations and that type of thing, and I think our quidance is very clear, that upon 8 notification of an inspection or in the aftermath or 9 10 during -- while an accident investigation is going on, 11 we would not, and it would not be a good idea, to do 12 anything that would preclude any kind of enforcement that might have resulted in fatalities. 13

Now, that being said, day-to-day certificate 14 15 management, if there is a safety problem that resolution needs to be taken or root cause discovered, 16 17 the way to get at that often is a team approach that involves the airline, the regulator and possibly the 18 employee groups involved, and we are finding that very 19 often, you can get at a problem and come up with a 20 solution and implement that solution faster through 21 2.2 that type of program.

There is a place there obviously in the need on the part of the operators and possibly the pilots or

mechanics involved, you know, to know that the goal here is to solve the problem, you know, not go around and more or less seek to take enforcement action.

4 Enforcement action is more or less a follow-5 up process.

6 DR. BRENNER: We heard inspectors from the 7 Alaska Airlines certificate express their beliefs that 8 the managers at the Northwest Mountain Region were too 9 close to the airline. Do you think the management was 10 too close?

11 MR. LACEY: I'm not aware of any evidence 12 where known issues or problems were overlooked, so to 13 speak, as a result of any kind of relationship with the 14 management of or personnel even within Alaska Airlines.

15 So, the answer to that, you know, at least at 16 my level and to my knowledge, would be no.

DR. BRENNER: Some people feel that Flight Standards is the policeman on the block and simply having an inspector in the hangar supports oversight, and one of the troubling complaints about ATOS is that the transition involves such heavy workload, that inspectors feel they're too caught up with ATOS things to actually go out and do any surveillance.

24 Have you heard this as a problem?

1 MR. LACEY: We have, and when I came on 2 board, ATOS was three months into implementation, and I 3 did even myself have that concern.

Workload within the district office can depend on a lot of things. It can be -- it can depend on the compliance disposition of the operator. It could be -- could depend on the certification activity that may be taking place within that operator, bringing on new fleet types, that type of thing.

10 It also can depend on the kinds of 11 investigations that may or may not be needed, and then 12 also enforcement actions are very intensive workload 13 factors.

14 Surveillance is one piece of all of those 15 functions that go on within the district office, and 16 ATOS being loaded on an office that may be bringing on 17 new types of airplanes may have lost some personnel. 18 It certainly was a valid criticism on the part of those 19 field personnel that, hey, I need work taken off of me 20 or more people here. I don't need a new program.

21 I think that was the nub of those particular 22 criticisms.

23 DR. BRENNER: What's the FAA doing to address 24 it?

1 MR. LACEY: Unfortunately, we're under, you know, a hiring freeze that initially looked like it 2 would be temporary. It extended on over a 24-month 3 4 period, and we're somewhat restricted to do that. 5 What you have to do in those situations, 6 though, is prioritize, prioritize activities, and we, 7 you know, certainly set the highest priority inside of Flight Standards on scheduled passenger air 8 transportation, you know. 9 10 That being said, a lot of then what's done 11 within the individual certificates depends on the 12 compliance disposition as it is known. If there were serious compliance issues or problems, known problems, 13 those would be a top priority. 14 15 Certification action or other activities associated with that operator would be set aside till 16 17 that's complete. So, it's really dealt with on a situational basis, depending -- that varies from 18 operator to operator. 19 20 The skill set that's in any individual office 21 can vary, and obviously highly-skilled, highly-2.2 experienced pair of inspectors might be able to 23 accomplish adequately well the same amount of work as for less-experienced inspectors. 24

1 So, there really needs to be close management 2 review at that field level and then up-channel 3 communications on what their situation is with any 4 individual operator.

5 DR. BRENNER: Okay. ATOS has now been 6 implemented for two years on the major carriers, and we 7 still have not hired all the staffing, such as 8 analysts, that are necessary for the program.

9 Do you think the FAA was too aggressive in 10 implementing ATOS?

MR. LACEY: I think Mr. Youngblut described 11 12 it fairly well. I think it was apparent that the existing program could be improved through better back-13 up in terms of data and analysis. It could be improved 14 15 with better processes for looking at broader areas within airlines rather than mapping here's the rule, 16 17 are they complying, and ATOS was the program, as I said, that was underway when I got there. 18

I thought that at first, it may be too -- it might have been too aggressive to have implemented in lo large carriers. I kind of did, you know, let's freeze it where it is actually when I walked in the door because there were some rather ambitious plans to expand it.

Looking at it, though, the process and the program and the improvements that have been made in the first 12 months, I think, justify going forward.

4 I don't think we anticipated, and I know 5 that, you know, there wasn't a pilot program done, the 6 workload nor the findings that ATOS is starting to 7 I think that we had anticipated that the 10 yield. largest carriers would have sophisticated programs that 8 9 not only met the intent of the regulations but far 10 exceeded them, and those would be good, you know, sort 11 of proving grounds, that the conditions were such 12 within those operators with which to implement it.

13 That hasn't necessarily been the case. So, 14 as we go forward with ATOS, I think there needs to be, 15 and I think Mr. Pearson suggested it, a set of 16 conditions within the operator that more or less need 17 to be met before we go down, you know, this particular 18 path.

DR. BRENNER: When fully implemented, how will you judge whether ATOS is effective? Are there data or safety trends that you can monitor to tell if it's working?

23 MR. LACEY: I think there's a lot of metrics 24 obviously that you can start to establish. I mean, you

1 can measure enforcement trends. You can measure the 2 number of safety issues identified, corrected and 3 effectiveness of those programs, but for me in my role 4 as the Director of Flight Standards, the true measure 5 in the end is the compliance disposition of the 6 operator.

So, for the foreseeable future, the measure will be by doing national-level sample inspections of important safety-related programs, and are those programs effective and meeting the intent of the regulation, and we will track that over time.

Is ATOS working?

MR. LACEY: Yes. I think it's very much working. I certainly believe that the surveillance function is finally identifying and understanding safety problems in a way that we haven't done before.

DR. BRENNER:

12

17 Where it needs to improve, and again this is 18 a program that's improving on an already fairly sound process, but where it needs to improve is there's a lot 19 of new data coming in in a way that we haven't seen it 20 21 before, and what we're working on right now, and this 2.2 is where these analysts come in to assist us and in 23 that data identify, you know, what is, you know, a high level of concern, present it to the field inspector, 24

the supervisor, the regional division manager and me in a way that the appropriate action with the appropriate amount of time and with the appropriate sense of urgency is done.

5 That is the challenge of the surveillance 6 business for us, and we're making good progress, I 7 would say. So, I think it's working. It's the way to 8 go, and we need to continue doing it.

As far as the other non-ATOS carriers, what 9 10 we are doing right now inside of Flight Standards, I 11 have a team of people going around to the other 130 12 some odd operators there are right now that are under non-ATOS program, meeting with the management of those 13 companies and basically providing training or 14 15 information on systems contact and system approaches. In other words, building the groundwork. 16

We will also do national and regional level assessments of the readiness of some of these operators to accept a systems approach to oversight and surveillance.

The goal in the end obviously could build the theory that if those systems are in place, there would be very little need for surveillance, that you could go to a model where you would come every two years, do a

1 certification top to bottom sort of review, and

2 disappear for two years, so to speak, unless there were 3 an issue or a problem or something that needed to be 4 investigated.

5 We're a long way from being there, but again 6 with good systems inside of these operators that are 7 robust and proper data sharing with the regulator that demonstrates compliance. There's 26,000 flights a day 8 9 that demonstrate something in terms of safety practices 10 and compliance. What we need to do is learn how to use 11 what happens every day, to demonstrate compliance and 12 the effectiveness of these programs.

DR. BRENNER: Sometimes from the outside, it seems like the FAA develops a new program every five to eight years and never completes it, and it's a little disturbing that there weren't more connections between ATOS when it was implemented and PTRS and SPAS, although we've been hearing evidence that there is the useful for that.

Is it possible that some sort of mixed surveillance program that integrates the best practices of programs like ATOS, PTRS and SPAS, might provide a practical program and ease the transition to ATOS? MR. LACEY: The answer to that, Dr. Brenner,

is yes. I mean, certainly the core strength of FAA
 Flight Standards is the experience and judgment of its
 workforce.

4 ATOS, you know, as a program, made that 5 workforce feel that that judgment and that experience 6 and that flexibility, you know, a good inspector knows, 7 can sniff out problems, so to speak, it was too rigid to take advantage of that, and I think, you know, to 8 me, to put it in simplest terms, that's what they're 9 10 trying to say to us. Give us great tools, but also 11 we're out here every day. We know where there's 12 issues. Don't make it so rigid that I can't follow that to its source, and we are making those kinds of 13 14 changes to the program as we go and as we learn, and I 15 think, I mean, you heard earlier about the Continuous Improvement kind of elements that are there. 16

17 The Flight Standards, the event-based process that has been in place for 30 some odd years and not 18 changed very much. This service should never be in 19 that position again, should constantly be improving 20 what it does based on what it learns, based on the 21 2.2 disposition of the industry it needs to regulate. 23 DR. BRENNER: I understand that you have an airline background, but that all inspectors who work 24

for you come from general aviation rather than an
 airline background.

3 If your office responsible for enforcing 4 standards in the airline industry, would it be helpful 5 to encourage further recruitment and promotion of 6 candidates with airline experience in the Flight 7 Standards Office?

MR. LACEY: I think it would be helpful. 8 9 Certainly in our field workforce, the Flight Standards 10 Service has relied on industry experience in hiring of 11 field inspectors, perhaps too heavily, and I think I am 12 feeling the impact already of full employment, six years, no serious, you know, shutdowns of a major 13 airline because that provided a lot of the current 14 15 workforce that's there right now, highly-experienced workforce. 16

We cannot, as we look ahead in the future,
count on bankruptcies to supply the agency with a
qualified workforce.

In terms of management, yes, we should have airline background. I think, you know, my airline experience is invaluable from seeing it from the regulator's point of view and listening critically to industry's point of view.

DR. BRENNER: And are there managers in your office with a maintenance background?

3 MR. LACEY: There are. You know, as I listed 4 my background, my strength is flight operations, that's 5 been it. Like all of us in positions, I've surrounded 6 my people. My deputy has a maintenance background.

7 I have a special position that I created right next to me which brought in a field-level 8 9 inspector with a maintenance background because I feel 10 that often, the first time that there is some distress, 11 so to speak, within an operator, it shows up in the 12 maintenance area of the organization, and having good maintenance advisors around me is important, and I 13 think developing a cadre of executives for this service 14 15 is again one of the things I intend to accomplish during my period of time here. 16

DR. BRENNER: Good. Thank you very much, Mr.Lacey. That completes my questions, Mr. Chairman.

MR. HAMMERSCHMIDT: Thank you, Dr. Brenner.Let's see. Mr. Guzzetti has some questions.

21 MR. GUZZETTI: Thank you, Mr. Chairman. Mr. 22 Lacey, you'll have to excuse me. I'm an engineer, and 23 I deal mostly with FAA personnel and one of the other 24 tentacles of the FAA, the Certification Service.

1

MR. LACEY: Yes, sir.

So, you have to excuse some of 2 MR. GUZZETTI: 3 my questions. From your perspective, as the top man in 4 the FAA's Flight Standards Service, I'm curious, what 5 steps should a principal maintenance inspector take 6 upon receiving a request by an air carrier to change a 7 grease used on a particular airplane model or system? What -- from your perspective, what do you think that 8 9 PMI -- what process should that PMI go through? 10 MR. LACEY: I think from the point of view of 11 a field inspector, you've always got to match your 12 skill to what you're being asked to do, and in the safety arena, if you're asked to do something that you 13 don't feel that you have the skill, the background, the 14 15 training or knowledge to do, you should seek further 16 advice and help. 17 You know, I don't think that that situation, you know, happens often. I really don't know what --18 you know, how a field inspector would react to seeing 19 that in the paperwork that flows across them. 20 21 I mean, you heard one principal maintenance 2.2 inspector say no -- you know, I mean, no commercial 23 objection, I think was the term, that was a flag, would be a flag, to say I need to drill further into this. 24

But certainly I wouldn't want any field inspector accepting or certainly certifying anything that they didn't have the background and skills to do. I would want to see that that was either passed on or they were provided the expertise to do that.

6 MR. GUZZETTI: Would it be appropriate or 7 acceptable in your view to have the PMI perhaps call 8 the local or the Aircraft Certification Office, whether 9 it be Long Beach or Seattle or whomever, to gain 10 further information about that?

MR. LACEY: Yeah. Absolutely. I mean, there are a fair amount of engineering activities that take place, you know, within any airline, and we do need to refer a lot of actions to where engineers are available that can essentially provide the field Flight Standards Unit with advice in that area, and that's kind of what I was trying to say through this skill match --

18 MR. GUZZETTI: Okay.

19 MR. LACEY: -- versus task discussion.

20 MR. GUZZETTI: In that regard, in terms of 21 the actual regulatory authority, I guess we discussed 22 earlier with previous testimony about the monthly audit 23 reports that PMIs received when task cards are changed.

24 MR. LACEY: Hm-hmm.

1 MR. GUZZETTI: How close would you expect a 2 PMI working in the Flight Standards Service to review 3 those monthly audit reports? Would you expect them to 4 review it religiously every month or --

5 MR. LACEY: I think it's impossible, you 6 know, to do a thorough review every month. I think 7 again, like any inspection or surveillance process, you 8 need some indicators to say I need to spend more time 9 here.

10 A lot of times, that indicator depends on, 11 you know, what could/would be the consequences of an 12 error or a mistake or some sort of rudimentary risk 13 analysis into what this task -- what are the 14 consequences of what it is, you know, that's happening 15 here?

16 The maintenance programs that are fielded and 17 approved allow a certain amount of flexibility, but 18 they're set so that an interval change, for example, of 19 greater than -- most programs would be somewhere like 20 10 percent that went on to that would require some 21 extra review and action and review of data to do that 22 type of thing.

But inside, you know, the allowable bounds,it then assumes the operator has within their system

the processes, the skilled people, to make the decisions, and again we're in an oversight mode to see that it's done in accordance with that program and the spirit of that program.

5 MR. GUZZETTI: Okay. In this particular 6 case, with Alaska Airlines, when they changed the 7 grease, the principal maintenance inspector at that 8 time stated that such changes could be made without 9 prior FAA approval under the provisions of the 10 airline's FAA-approved maintenance program.

Would you agree with that PMI's statement? MR. LACEY: You're pushing my level of expertise a little bit in that arena, but if the functioning of the component depended on lubrication, I would say, you know, that that would be -- especially in the flight control area, that it is somewhat -- that statement, I find somewhat surprising.

18 MR. GUZZETTI: Okay.

19 MR. LACEY: Okay? You know, --

20 MR. GUZZETTI: That's fine. Thank you.

There are other things that that PMI said, the PMI that was acting as the PMI when the grease change was made.

23 MR. LACEY: Sure.

24 MR. GUZZETTI: He said that changes to

"accepted" manuals used as part of the overall FAA approved maintenance program can be made and then
 submitted to the FAA as part of the routine change
 notification process.

5 In accepted manuals, they go ahead and make 6 the change, publish it and send you a copy, and you 7 read it. If you have any objection to it, you notify 8 them in writing that you have objections. If you don't 9 tell them, then it's accepted.

Would you agree with that general philosophyabout accepting changes?

MR. LACEY: Yeah. Once again, though, there should be some fairly specific boundaries set around, you know, what kind of changes can be made.

MR. GUZZETTI: Okay. The -- and when he was asked to comment specifically about the Alaska Airlines lubrication change and the task card change in '97, he stated, "I don't know that anybody caught that or noticed it or bought off on it or looked into it at all."

21 With that in mind, is it possible -- are 22 there policies within the Flight Standards Service to 23 ensure that each and every task card change 24 notification is reviewed to ensure that it gets a

1 review?

2	MR. LACEY: No. I mean, I can't say that,
3	you know, every single change again gets a review, but
4	if an operator is informed by a manufacturer to
5	essentially get FAA approval for something, and that
6	approval involved an engine I mean, engineering
7	approval for that, I would expect that operator to do
8	that.
9	Now, the Flight Standards Service may or may
10	not have this ability into that, but I would think in
11	any kind of an inspection or review, that that data
12	would be available, you know, for our review.
13	MR. GUZZETTI: Okay. In that same vein about
14	grease and how much knowledge is out there, are PMIs
15	required to receive and review the service bulletins
16	and service letters that come out from the
17	manufacturer, whether it be Boeing or whomever, AirBus,
18	Douglas? Are they are all PMIs automatically on the
19	receive list from the manufacturers to receive those
20	items, and are they required to review them, if they do
21	receive them?
22	MR. LACEY: You know, I really don't know the
23	answer to that question. I do expect, you know, that
24	certainly I think that that would be a good idea. I

think it probably is happening. Whether I could go as
 far as to required, you know, I don't think I could go
 quite that far.

I think any important related information that comes to a principal inspector or any partial program manager or whatever that's involved in the office should take that piece of data and read it for a level of understanding, and certainly I would like to see within the office.

We have a service bulletin or whatever that came down on an MD-80. Here's what we think it means. Let's go see what the operator thinks it means and what they're doing about it, if anything, you know, that type of discussion to take place.

15 MR. GUZZETTI: Okay. Same question regarding temporary revisions that are issued by manufacturer. 16 17 Would you expect a PMI that's, say, surveiling a carrier that operates 747s, if that carrier receives a 18 temporary revision from the manufacturer, and 19 apparently all carriers -- all the operators are sent 20 21 these temporary revisions to the maintenance manual by the manufacturer. 2.2

Does -- is there some system in place to ensure that the PMI also gets a copy of that temporary

1 revision, so that that PMI can ensure that the

2 temporary revision was reviewed by the carrier and 3 implemented or not implemented or the story behind that 4 implementation with that carrier?

5 MR. LACEY: To be quite honest with you, I've 6 been with the agency for 24 months, I could address 7 better the library requirements of an airline than I can the district office. So, if there is, you know, 8 one of my staff here that can answer that, you know, I 9 10 would do that, but the library requirements that are 11 kept in the district offices as part of the Certificate 12 Management, you know, I just can't get down to that level with you. 13

14MR. GUZZETTI: Okay. I only ask the question15--

16 MR. LACEY: Sure.

17 MR. GUZZETTI: -- because it came up, you 18 Boeing has issued two temporary revisions to the know. end play check procedure, and we've learned during the 19 investigation that -- well, we haven't found out yet, 20 21 we need to verify, whether or not the FSDOs receive 2.2 those temporary revisions because it's conceivable that 23 a temporary revision could -- an airline can receive it and, you know, throw it in the trash or modify it and 24

implement it into their program without the PMI really
 knowing what exactly the temporary revision was.

3 MR. LACEY: Yeah. Certainly I see your 4 point, and, I mean, certainly it would be a check and a 5 cross-check, and again that's the way we build the 6 structure here for that to happen.

So, I certainly agree with the premise. I
just don't know the answer right now in terms of what's
actually happening.

And just one last 10 MR. GUZZETTI: Okay. 11 question. Do you believe that operators of -- Part 121 12 operators should notify PMIs about any proposed changes in grease for critical flight control systems and to 13 supply fully research data regarding those grease 14 15 changes? Do you think that would be a good idea or --MR. LACEY: I certainly do. I think it would 16 17 be a good idea that (1) that notification take place, and then the procedure in which they were going to 18 execute that. 19

I mean, again, it's another set of eyes looking at that particular procedure. So, whether it's a purge, wipe-down purge, you know, exactly how they're going to execute that would be it, and certainly I would like to see in the work plan of the office, so to

1 speak, to go by and see, you know, how that grease is housed, what are done with the tools used to -- used in 2 doing that, on and on and on, you know. I mean, that's 3 certainly the goal of what I think -- certainly the 4 5 goal of Certificate Management. 6 MR. GUZZETTI: Okay. That's all the 7 questions I have, Mr. Chairman. MR. HAMMERSCHMIDT: Okay. Thank you, Mr. 8 Guzzetti. Going next to the Parties for their 9 10 questions, beginning again with Alaska Airlines. 11 CAPTAIN FINAN: No questions, Mr. Chairman. 12 MR. HAMMERSCHMIDT: Thank you, Captain Finan. Boeing? 13 MR. HINDERBERGER: No questions, Mr. 14 15 Chairman. Thank you. 16 MR. HAMMERSCHMIDT: Thank you, Mr. 17 Hinderberger. Aircraft Mechanics Fraternal Association? 18 MR. PATRICK: No guestions, Mr. Chairman. 19 MR. HAMMERSCHMIDT: Thank you, Mr. Patrick. 20 The Air Line Pilots Association? 21 CAPTAIN WOLF: Yes, sir. Just one question. 2.2 23 Do you believe that you have a good system for evaluating the effectiveness of the ATOS System? 24

1 MR. LACEY: I think the metrics for the ATOS System are in the process of being built right now, and 2 whether the right metrics obviously we will continue to 3 take a good look at it. 4 5 CAPTAIN WOLF: Okay. Thank you. That's all 6 I have, sir. 7 MR. HAMMERSCHMIDT: Thank you, Captain Wolf. The Federal Aviation Administration? 8 9 MR. DONNER: Thank you, Mr. Chairman. We 10 have no questions. 11 MR. HAMMERSCHMIDT: Thank you, Mr. Donner. 12 We now go to the Board of Inquiry for any questions. Mr. Berman? 13 MR. BERMAN: Thank you. Hello, Mr. Lacey. 14 MR. LACEY: Mr. Berman. 15 MR. BERMAN: First of all, I just wanted to 16 17 catch up on something that you mentioned during your testimony earlier that I hadn't heard about before. 18 What was wrong with the Reliability Program 19 that Alaska Airlines has found in the NSI? 20 21 MR. LACEY: I think the inspection, Mr. 2.2 Berman, to me, you know, revealed that -- and 23 especially when you looked at some of the interval extensions, it was basically justified on a lack of in-24

1 service difficulties or performance when there was in fact better data that was -- that might -- or better 2 data or other data that was available. 3 MR. BERMAN: That's a subject we discussed a 4 5 lot earlier, as you know. 6 MR. LACEY: Yeah. 7 MR. BERMAN: Can you tell me more about what 8 kinds of data the FAA was thinking about? 9 MR. LACEY: Well, I mean, certainly the 10 discussion of the end play check. I think the end play 11 check measurements could certainly be part of that 12 data, and tracking those measurements at a measurement inspection. I think it may yield that there -- you 13 know, a case here and there of excessive wear. 14 15 It's data, and it's an opportunity missed, let's put it that way, in my view, and there 16 17 certainly, you know, may be others, but certainly that's the one that's been the topic, and that's why I 18 wanted in terms of a cut across the industry to take a 19 look at reliability programs, what data. 20 21 I mean, certainly the flight data -- current 2.2 state of the art flight data recorders are providing 23 data in terms of the performance of those aircraft on a daily basis, and it's that information getting into 24

these reliability programs in a timely way, and that was the -- I mean, the agenda, so to speak, towards looking across the industry for those kind of practices, and where they may exist and challenge the industry, so to speak, to embrace those.

6 MR. BERMAN: Have you established a formal 7 review along the lines you suggested?

8 MR. LACEY: We, you know, as you know, I 9 think it was a little over a week ago published the 10 summary results of looking at four programs and nine 11 other major carriers.

In those results, we published what we considered the best practices, what those four programs should look like in terms of process and completeness and the accountabilities and responsibilities and attributes, and we are anticipating some forums with industry to essentially fine-tune that.

18 MR. BERMAN: Did you specifically find in the 19 other carriers that were recording test data, not 20 necessarily end play tests, but maintenance test data 21 as opposed to just recording that the test was 22 completed?

23 MR. LACEY: Yes, we did.

24 MR. BERMAN: Okay. Fair enough. I'd like to

get back to the inspections of the other carriers in a
 moment, but first to turn to ATOS a little bit.

What's your overall opinion of ATOS'sperformance over the past couple of years?

5 MR. LACEY: On one level, the first level I 6 would talk would be, you know, acceptance, both on the 7 part of the workforce and the industry, and I 8 basically, Mr. Berman, sent a team out, starting last 9 summer, visited all 10 offices, all 10 operators, and 10 essentially held what I would call outreach or 11 listening sessions.

What are the issues? What do you think of it? Will it work? What's it doing for you? What are you doing as a result of it, and rolled that up. That has essentially become at this point then the map in terms of the actions that are taken, are being taken right now.

I think it is a tremendous accomplishment that within a little -- you know, in a relatively short period of time, the program has gotten as far as it is, the level of acceptance is as high as it is. As I said before, though, it's got to be

23 matched to the skill level of the workforce, the 24 readiness of the operator, and basically available

1 workforce to accomplish it, and we're right now, I mean, you know, making adjustments to make that happen. 2 MR. BERMAN: Okay. And it's been said that 3 the current air traffic controller contract had an 4 5 adverse negative effect on Flight Standards staffing. 6 What's being done to resolve that budget 7 quandary this year? MR. LACEY: Flight Standards staffing reached 8 a peak in 1998 and attrited, you know, during the 24-9 10 month freeze. I anticipate this year, without, you know, any unplanned budget upsets, you know, which can 11 12 happen, to move back towards the 1998 level of staffing. 13 MR. BERMAN: Okay. Does that mean the freeze 14 15 will be lifted? MR. LACEY: The freeze will be lifted, yes. 16 17 Freeze is lifted actually. MR. BERMAN: Okay. A specific on the 18 staffing. I reviewed the ATOS Special Project Draft, 19 that there seemed to be a lot of pop-ups of cabin 20 safety, dissatisfaction with how ATOS was handling 21 2.2 cabin safety. 23 Is that something you're doing something about? 24

1 MR. LACEY: The -- specifically, no, I don't, you know, see the initiatives being taken necessarily 2 targeted at the cabin safety area, but certainly the 3 4 cabin safety inspectors are part of the overall team 5 and the overall staff. So, they're impacted by any 6 decision, you know, that is made concerning the 7 program. MR. BERMAN: I'm sorry. Go ahead. 8 9 MR. LACEY: Go ahead. But what I was going 10 to say is certainly getting the geographic workforce 11 fully productive and properly assigned is a high 12 priority of mine. 13 MR. BERMAN: Hm-hmm. Is the cabin safety inspector position a required position in ATOS? 14 15 MR. LACEY: I would have to check on that. MR. BERMAN: Okay. 16 MR. LACEY: I believe in each of the --17 because of -- and I don't know whether it's just 18 because of the size of the carrier that justifies the 19 cabin safety position or ATOS, Mr. Berman. I'd have to 20 21 check. 2.2 MR. BERMAN: Okay. Thanks. We'll look 23 forward to that. 24 MR. LACEY: Yeah.

1 MR. BERMAN: We were -- I'm bringing that part up because we're aware that there was no cabin 2 safety inspector at Alaska Airlines for about 18 3 4 months. Were you aware of that? 5 MR. LACEY: Yes. 6 MR. BERMAN: What's your opinion of that? 7 MR. LACEY: Well, I mean, again in a hiring 8 freeze, the disadvantage of a hiring freeze is you 9 can't take management action in terms of where, you 10 know, down -- it happens where it happens. 11 So, if somebody retires or leaves, you know, 12 or seeks additional appointment, that hole is there. Now, what you try to do is, you know, I mean, use other 13 cabin safety inspectors, you know, and address those 14 15 issues either on a national level by providing specific expertise on a temporary basis in there and keep an eye 16 17 essentially on the data, if there's any issues or --MR. BERMAN: Going to the special inspection 18 of the nine air carriers, what generated that? 19 20 MR. LACEY: It was the National Safety Inspection of Alaska Airlines. I mean, I thought it a 21 2.2 prudent next step to essentially assess the health of 23 the other nine carriers, not only because they're ATOS but also because they provide about 90-89 percent, I 24

1 think it is now, of the scheduled air transportation in the United States, and I thought that we really ought 2 to look at the CAS Program, the reliability programs, 3 4 internal audit program, which essentially is a program 5 a carrier should have established. It's not a 6 regulatory program, but certainly you would expect a 7 major operation to have a management program to help 8 them assure regulatory compliance, and then safety 9 program.

10 I was concerned on the 60-mechanic issue at 11 Alaska and other churns, so to speak, of information 12 that was coming out of the Alaska issue as to whether safety programs were embracing the maintenance 13 departments of these major carriers. It's a large 14 15 employee force with a lot of -- with, I mean, a lot of knowledge there, and can they walk in to a safety 16 17 department out of their chain of command, whatever -however it's structured, sit down with somebody who 18 understands maintenance, and what they might be saying, 19 and that was, you know, the philosophy. 20

I thought the combination of those four programs, if they were vigorously applied, would provide a high level of assurance that major systemic problems, either regulatory compliance or safety

problems that were emerging in those operators, would
 be addressed in a timely way.

3 MR. BERMAN: If those programs are so 4 essential, why aren't all four required of all air 5 carriers?

6 MR. LACEY: That -- I mean, again, we could 7 eventually be there. I think in terms of implementing 8 those kinds of activities, a collaborative approach can 9 -- it can happen a lot faster than to go through a 10 rulemaking process.

In an ideal world, we will eventually get to rulemaking. The rule would be practiced what is actually out there to rule which then makes rulemaking go a lot quicker than the Federal Government trying to define what the best practice would be through a rule, so to speak.

17 So, I think that aviation safety on a 18 national level can be advanced more through this type 19 of effort. This national level review is now available 20 to the world and gives a good place to start, to start 21 to define, you know, what can and should be done in 22 these areas.

23 MR. BERMAN: One of the four that's the least 24 developed is the internal evaluation program. Two of

1 the others are required, and the reliability is almost 2 required.

3 MR. LACEY: Yeah. Once you have a 4 reliability -- you don't have to have a reliability 5 program. Once you do, it becomes part of the operation 6 specification of the airline, and then it essentially 7 is viewed as a required program.

8 The other two, yeah. Safety, we require a 9 director of safety. Duties, responsibilities and 10 specific programs. We have a little bit of guidance 11 out on it, and we have some advisory material out on 12 what a model internal evaluation program might look 13 like.

We are in the process of updating those as a result of what we've learned in this national review. MR. BERMAN: I just made a quick note. The Safety Board is on record, having recommended that safety programs be required to follow an internal evaluation program. So, we're vitally interested in that.

21 MR. LACEY: Okay.

22 MR. BERMAN: Alaska Airlines. Why didn't 23 they get the same kind of inspection as the other nine? 24 For the other nine, you chose a much different type of

inspection, one that's much more system and safety
 attribute oriented.

Alaska, they went much more detail oriented.Why the difference?

5 MR. LACEY: Well, you know, I mean, Alaska 6 Airlines is in a special situation post-fatal accident. 7 At your own investigation, we had an inspection 8 already that had reviewed it, increased surveillance 9 program underway, and a more or less directed action 10 program that was folding out.

I felt, Mr. Berman, we knew all there was to know about Alaska Airlines, and it was not necessary to include in this particular round of audits, but we certainly will in the future.

MR. BERMAN: I'm kind of thinking more of the other nine airlines, because -- I don't want people to misunderstand this, but in some respect, the NSI at Alaska Airlines was fantastically successful because it got to the root of a problem.

20 Did you consider using a similar strategy 21 with the other nine in terms of following an airplane 22 through C checks and being very hands-on? 23 MR. LACEY: The intention of the National 24 Program Review was to take a relatively quick cut

across a major portion of the industry, basically a
 temperature health check of the industry.

The results of that, Mr. Berman, will be more 3 4 in-depth follow-ups, where we think that they are 5 necessary, and I think the small teams that did that, 6 and the length of time that they were there, and the 7 expertise on those teams, and the standardization that those teams were able to accomplish by doing, you know, 8 relatively quick checks, you know, give us a lot of 9 10 good information on not only where the best practices 11 are but where more work is needed.

MR. BERMAN: Several FAA people have
testified today that the 64-mechanics letter was a big
motivator in drawing attention to Alaska Airlines.

What does it mean to you that, as far as we know, there was no substantiation of those allegations or no enforcement actions or other actions taken as a result of that?

MR. LACEY: That's -- I mean, again, that was the outcome of that particular review, but I would say that the Flight Standards Service receives a lot of information from the licensed personnel out there as to what may be safety concerns and issues, and we track each and every one of them down.

Sometimes they can be substantiated, sometimes not. It doesn't mean, though, that we're not concerned about it. We will, you know, again, hold it in our corporate memory, so to speak, that there may be issues there. We just haven't been able to

6 substantiate it yet.

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7 MR. BERMAN: I see. Now, going back to the other nine airlines, in the strategy that was chosen 8 9 for that inspection, I understand from a review of 10 that, that it combined both the safety attributes, the 11 controls and, you know, the procedures and evaluations, 12 but also was supposed to be reviewing products of those things. Each job aid included a product section that 13 14 looked to be the part where the FAA was going to look 15 at how these systems really were working, examples of 16 systems.

17 MR. LACEY: Right.

18 MR. BERMAN: Yet I saw no reference to19 products, either good or bad, in the summary report.

20 MR. LACEY: Yeah. I mean, the detailed 21 reports on each individual operator, I mean, are still 22 a work-in-progress. We're expecting action plans from 23 each of the operators. Again, we're in a lot of non-24 regulatory areas, and a lot of that material was work

tools and things that were used by the inspectors, you
 know, as they went through their process.

3 Process, though, proved to be so successful,
4 that we will move those procedures into the ATOS
5 Program, and also, I plan to direct the regions to use
6 those tools in performing inspections on a broader
7 section of the industry.

8 MR. BERMAN: The nine airlines survey 9 identified -- generally, I think, it made a conclusion 10 that CAS Programs were inadequate. What's the FAA 11 doing about that right now, given that it's a required 12 program?

MR. LACEY: What we identified, to my recollection, that out of the nine -- and if we include Alaska, 10 operators, that essentially four of them could be significantly improved. Either there was not what you would say documented follow-up. There was not enough audits being done or the audit period was not being complied with and that type of thing.

Each Certificate Management Unit will be -is working those issues with the operator. We're also, though, looking at -- again, we put out in that report what a model CAS Program might look like, and we'll continue to refine that and then revise our guidance

1 material, both to the inspectors and the industry, as a 2 result of that. I think it's been a very worthwhile 3 exercise.

4 MR. BERMAN: How much time do you feel it's 5 appropriate for the FAA to get all these required 6 programs on line and working properly?

7 MR. LACEY: As soon as the problem is 8 identified, it is being worked, and as those teams --9 before they even left the carrier, the specific --10 those specifics were being addressed.

MR. BERMAN: But to complete the resolution? MR. LACEY: I mean, again, action plans -- I mean, what we want to see in an action plan, that it's completed within a reasonable period of time, puts the burden on us during that period of time in terms of extra surveillance to assure safety.

17 But there is a sense of reality in that an 18 over-rush plan, if you do have to hire significant number of highly-gualified personnel, do a major 19 rewrite of the procedures, that there's a reasonable 20 21 amount of time to get that done, and that what is done is successful. You need a certain amount of time to 2.2 23 see that that's done, and that's why you see developing what I say various gates along the way, because all of 24

1 us that have run large organizations may take an initiative, find it did not have the result that we 2 wanted, and early on identify that and correct that. 3 So, the action plans aren't locked in stone, 4 5 but a reasonable amount of time with the right amount 6 of resources is part of the -- I won't say negotiation 7 process, but part of the discussions that take place in 8 accepting an action plan. 9 MR. BERMAN: I think I've finally found the 10 right man to ask my question to. So, thank you, Mr. 11 Lacey. 12 Is the FAA making any attempt to back track and go back and review the -- basically the failure of 13 ATOS to find the maintenance manual and CAS problems at 14 15 Alaska Airlines? MR. LACEY: What I did, Mr. Berman, is I 16 17 basically put a couple of analysts that took the historic ATOS data on Alaska Airlines, and then I asked 18 them to go through it, you know, month-by-month, and 19 then again what -- to try to get at what this -- how do 20 21 you turn this data into appropriate actions at the

22 appropriate time, and there are in that data, certainly 23 with hindsight, a lot of pieces of information which 24 surfaced later on.

1 I'll be more than happy to sit down with you and review what data we had, how it was dealt with, and 2 how it was displayed at the time, and where we're 3 4 working, and how to better display that data. 5 MR. BERMAN: You're referring to inspection 6 data under ATOS? 7 MR. LACEY: Yes, which to me is the most reliable data. You don't want to overstate, but having 8 9 done other analysis programs, one for the Department of 10 Defense, data can consume an awful lot of surveillance 11 time, chasing down things that turn out to be ghosts. 12 So, there needs to be a balance between the aviation judgment that comes in when you look at that 13 data, and I was -- you know, the interest in the job 14 15 description of the analyst, I had a high interest in it, too. 16 17 Do we put the weight on analytical capability or aviation judgment in the sense that, gee, I see this 18 data, and it may mean something out on some shop floor 19 or in some airplane? 20 MR. BERMAN: I'm sorry. Just to be sure that 21 2.2 I understand you, --23 MR. LACEY: Yeah. MR. BERMAN: -- are you talking about data, 24

1 CAS data, or are you talking about --

2 MR. LACEY: No. I'm talking about --MR. BERMAN: -- ATOS? 3 MR. LACEY: -- ATOS. Most of what we're 4 5 referring to is ATOS data, is inspector-collected data, which is the kind of data I need. It's validated data 6 7 by a qualified person, that it actually is there. 8 MR. BERMAN: Okay. MR. LACEY: Versus other data, whether 9 10 somebody looking at financial reports or accident 11 trends, that may say that there is an issue here or 12 not. Okay. We consider that to be 13 MR. BERMAN: part of our accident investigation. So, we'd 14 15 appreciate that, and we're also --16 MR. LACEY: Sure. MR. BERMAN: I'm also interested in --17 because I didn't see that in the ATOS summary -- the 18 ATOS review, whether the FAA is doing a system safety 19 study on itself, to see whether ATOS -- why ATOS didn't 20 work in that case. 21 2.2 MR. LACEY: Yeah. That's taking place, and 23 I'll be more than happy to demonstrate that to you. MR. BERMAN: Okay. Thank you. You mentioned 24

1 that you feel it's a good combination to have ATOS-type 2 surveillance and event-based surveillance.

Have you initiated a program to spread that to the other nine carriers or other -- yeah. I guess ti would be the other nine carriers.

6 MR. LACEY: Yeah. I basically have a 7 direction to the field that's actually going through 8 staff process, union notification process right now. 9 That should be in place after the first of the year.

10 MR. BERMAN: Okay. I guess my last question 11 is kind of a philosophical one, because you mentioned 12 that the goal is eventually to eliminate surveillance, 13 and I think I understand where you're coming from.

14 MR. LACEY: Yeah.

MR. BERMAN: Do you think that airlines -airlines are competitive enterprises, and they're under various pressures. Do you think that they can be relied upon to police themselves in all of their internal systems?

20 MR. LACEY: The answer to that is no, and, 21 you know, again, I put that out there as a goal or an 22 ideal that'll never be reached. Airlines are employee-23 intensive. Human beings make mistakes. They're also 24 very large organizations that have a lot of pressures

1 driving towards different priorities.

I do not think nor have I ever seen an 2 3 airline as an organization that has intentionally, you 4 know, let themselves dip below the rules, so to speak, 5 or regulatory posture, but it can happen, and what 6 you've heard here in this testimony, that there is a 7 strong reliance on highly-qualified personnel. I have to always be concerned, if they leave, 8 what happens, you know, and there is turnover and 9 10 change and different pressures that can come within 11 those organizations. 12 It is the role of the regulator to see that the proper focus stays on safety and safety-related 13 programs. So, I'm not looking to being put out of 14 15 business in the near future. 16 MR. BERMAN: Okay. Thank you, Mr. Lacey. 17 MR. HAMMERSCHMIDT: Thank you, Mr. Berman. Mr. Clark, any questions? 18 MR. CLARK: You stated earlier that when PMIs 19 are evaluating changes coming through, that they should 20 perform a basic risk analysis. Do they receive any 21 kind of training in that area? 2.2 23 MR. LACEY: There is some very, very fundamental, you know, risk concepts presented in some 24

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of the ATOS familiarization courses and the revised
 courses.

I believe, Mr. Clark, now, it's -- it would not be realistic to change -- to basically train 3,000 inspectors in risk analysis, but there should be, you know, that expertise, especially in these larger Certificate Management Units.

8 The right number and the right training, you 9 know, we're working to define.

10 MR. CLARK: Good. The -- also, a part of 11 ATOS I see in here are defining performance measures. 12 The airlines defining performance measures for 13 themselves.

14 Is there anything like that planned for ATOS?
15 I don't know what those measures may be, but would
16 that be an appropriate thing to implement into ATOS?

MR. LACEY: Yes, it would be, and, you know, what the appropriate set of metrics, and to me, there'd be a large number of metrics, and then what they would tell us. I mean, we're in the process of defining that.

The program again has been in initial implementation. It's been measured by progress towards various milestones in implementing the program,

1 completing modules, completing revision of the training programs, complete, you know, update of the checklist 2 used by inspectors, and then I have a national program 3 audit staff that both looks at the -- at, you know, the 4 5 standardization and compliance with the program 6 guidelines and does assessments of the condition of the 7 operators. That's how it's being administered right now. 8 That can be improved, though. 9 10 MR. CLARK: Okay. And one final area. The -11 - there are a lot of issues right now about lubes and 12 oils and compatibility and all of that. Have you provided any information or 13 instruction to your PMIs or have asked them to provide 14 15 any type of information to the operators regarding 16 that? 17 MR. LACEY: Not that I'm aware of. 18 MR. CLARK: Okay. Thank you. MR. HAMMERSCHMIDT: Thank you, Mr. Clark. 19 Dr. Ellingstad? 20 DR. ELLINGSTAD: Just a few questions, again 21 2.2 dwelling on the Analysis Module within the ATOS System. 23 You've said some interesting things about data that I'd like to explore a little bit. One of 24

them, you made a reference to data sharing with the regulator. I'm assuming what you're meaning is the various data systems that the carriers are operating and some participation between the carriers and, I assume, your analysis folks.

6 Could you elaborate a little bit on that? 7 MR. LACEY: I have two programs that are 8 being put forward right now, which we think are very 9 promising in terms of what they may yield in the way of 10 data.

11 One is called the Flight Operations Quality 12 Assurance Program. The -- and what that does is 13 essentially provide data on what that aircraft 14 experienced on each individual flight.

15 The state of the industry has now put 16 software essentially over that that alerts various 17 excedances or they can set various parameters around 18 that.

19 I think that data in terms of demonstrating 20 qualifications of the pilot or providing the FAA with 21 information that perhaps an air traffic control 22 procedure or an instrument procedure is -- could be 23 better designed is certainly, you know, an important 24 part of those kinds of efforts.

1 The other program is called the Aviation 2 Safety Action Program. It's being implemented again in 3 the Flight Operations arena, and what that allows is a 4 flight crew member to basically write up, you know, 5 something that happened that could impact safety. I 6 moved the wrong switch. I did this, did not result in 7 anything, but this is what happened.

8 We term that as an "event". That event then 9 gets reviewed by the company, the FAA and the pilot 10 group, and a solution, you know, may come out of that 11 or again it may be just a data point. The 12 demonstration airline that did that has been receiving 13 in the tune of 1,300-1,400 of those reports.

Flight Operations Quality Assurance Data, another large flow of data. We're opening or expanding the flow of service difficulty data. I think all of that data, if properly displayed and properly analyzed, can lead to taking initiatives and actions to address problems --

20 DR. ELLINGSTAD: You used --

21 MR. LACEY: -- before they become major 22 problems.

DR. ELLINGSTAD: Are you suggesting then that
FOQA and ASEP-type programs would become an integral

1 part of your ATOS analysis activity?

2 MR. LACEY: Yes. DR. ELLINGSTAD: And are you or will you be 3 4 staffed to handle that? How does -- what I'd like to -5 6 MR. LACEY: Yeah. Right. 7 DR. ELLINGSTAD: -- explore a little bit, how 8 this data-sharing --9 MR. LACEY: Right. 10 DR. ELLINGSTAD: -- works in terms of what 11 analysis you do, what interaction you have with any 12 analysis programs that the carriers are doing. MR. LACEY: Right now, those programs are 13 within the carriers themselves. That kind of data 14 15 remains within the carrier. We are working on means and methods to 16 17 essentially identify the data from any carrier and to make it available, you know, for analysis to 18 appropriate parties, and that's where the focus and the 19 effort is right now. 20 21 I mean, certainly those programs can help one 2.2 carrier, but what we're all after, whether it be a 23 manufacturer, operator or a regulator, is essentially identification and resolution of issues and problems, 24

and I think we're right at the edge of moving to the
 next level of being able to do that, which should
 certainly result in reduced accident rates.

4 DR. ELLINGSTAD: Okay. And when would you 5 see that happening?

6 MR. LACEY: It's happening on a very small 7 level, you know, right now, I mean, again, through the 8 demonstration programs. I think it's hard to put a 9 time table on it, but I would certainly expect within 10 the next 24 months to see that kind of initiative and 11 process advanced in a large way.

DR. ELLINGSTAD: You also made a comment at one point in response to another question about the capturing of data like the end play measurements, and I assume that you meant within a carrier's reliability program or whatever.

17 MR. LACEY: Hm-hmm.

DR. ELLINGSTAD: That clearly hasn't been or isn't now being done with Alaska, and I'm not sure what the other carriers are doing in that respect, but how do you see -- what role do you see, you know, ATOS and your analysis folks there playing in terms of defining those kinds of data requirements and those kinds of quality analysis activities?

1 MR. LACEY: I think that that's -- you've 2 outlined, Mr. -- Dr. Ellingstad, the outline. That's 3 our future, so to speak, is doing exactly that type of 4 thing, is taking that kind of data, making it, you 5 know, meaningful not only to that operator but 6 meaningful to the manufacturer and all other operators. 7 That's our challenge.

8 The technology is there to do it. Some 9 rudimentary processes are in place to do it, and I 10 think that the FAA, as a regulator and world leader in 11 setting aviation standards, plays a significant role in 12 seeing that that comes about.

DR. ELLINGSTAD: Do you expect that we'll see, you know, some specific requirements in that respect soon?

MR. LACEY: I think -- I mean, again specific requirements, if you're meeting a regulatory requirement to provide that data, I don't see that in the near future.

The way these programs are going forward is on a collaborative way, and with some -- I mean, it requires a certain level of trust, so to speak, that the data will be appropriately used for the appropriate purpose, and we -- that's -- we are working, you know,

1 to do that, again to figure out how do we get this data to the right safety purpose in an aggregated way. 2 3 DR. ELLINGSTAD: Well, during the data-4 sharing or the analysis on both sides, you know, 5 obviously it's the kind of thing that requires some 6 kind of expertise. The FAA has apparently had some 7 recruitment difficulties or other problems in terms of 8 finding analysts. 9 What about the airlines? Are they employing 10 the kind of talent that it takes to do that kind of 11 work on their end? 12 MR. LACEY: I think in the national level review, we did identify, you know, some airlines that 13 14 have made very good progress in that arena.

15 In terms of the competitive marketplace for 16 those skills, you're exactly right. I mean, that is, 17 those skills are highly prized by all industries, and 18 it is difficult to get those people.

We may need to essentially take aviation safety inspectors or those with aviation credentials and train them in analysis, work it backwards, but for the small numbers that we need right now, and, you know, maybe the down trend in the computer industry, I mean, we're able to get the 10 or 12 that we need right

1 now, to get the program up to support ATOS.

2 DR. ELLINGSTAD: Okay. MR. LACEY: But the broader programs, I mean, 3 4 again that's an industry or national issue that needs 5 to be addressed. 6 DR. ELLINGSTAD: Okay. Thank you. Finally, 7 do you have a clearer idea of the qualifications for these analysts than we heard before? 8 MR. LACEY: At the national level, they have 9 10 operations research credentials and requirements as a 11 higher-graded, and I view them as being those that then 12 will be able to, you know, set and lay out and develop 13 the programs. Within each district office, you know, I 14 15 mean, I certainly would be happy to provide you, you know, with the position description, but it's not --16 17 the skills and qualification level is not quite that 18 high. DR. ELLINGSTAD: Okay. We'd appreciate 19 getting that information. 20 MR. LACEY: Yeah. 21 2.2 DR. ELLINGSTAD: Thank you. 23 MR. HAMMERSCHMIDT: Thank you, Dr. Ellingstad. Let's see. Mr. Rodriguez has some more 24

1 questions.

2	MR. RODRIGUEZ: No. Just one, sir.								
3	MR. HAMMERSCHMIDT: Okay.								
4	MR. RODRIGUEZ: Mr. Lacey, would you know								
5	where this status report on ATOS that's headed for								
6	Congress is?								
7	MR. LACEY: It's been across my desk, and								
8	I'll be more than happy to, you know, provide the Board								
9	with a copy of that report. It's about a four-page								
10	report that's essentially went through it was going								
11	through an internal, what's called within the agency,								
12	plain language review, and to those that have been								
13	listening to this hearing, you know that that's an								
14	issue and problem for all of us.								
15	So, I think that that process is complete,								
16	but when that goes through that review, sometimes the								
17	original intent is missed. So, it's been going								
18	through, you know, that kind of ping-pong kind of								
19	thing.								
20	MR. RODRIGUEZ: In a very short time frame,								
21	that will be coming to us?								
22	MR. LACEY: Yeah. I'll be glad to send that								
23	over to you next week in its current state.								
24	MR. RODRIGUEZ: That's all I have, Mr.								

1 Chairman.

MR. HAMMERSCHMIDT: Okay. Thank you, Mr. 2 Rodriguez. Are there any other questions for this 3 4 witness? 5 (No response) 6 MR. HAMMERSCHMIDT: In that case, Mr. Lacey, 7 we certainly appreciate your participation in this hearing and your cooperation with this investigation. 8 9 You've been a very responsive witness today. 10 MR. LACEY: Thank you, Mr. Chairman. 11 MR. HAMMERSCHMIDT: I'll give you the 12 opportunity to add anything you would like to add for 13 the record. MR. LACEY: As I leave, a couple of thoughts 14 15 certainly as we go into the holidays, and I would say to the families that are here and listening to this, I 16 17 lost immediate family members in a transportation accident this year. I certainly know what they're 18 suffering and what this time of year means. 19 20 Also because it's another mode of transportation, something like this is not taking 21 2.2 place, and I want to say that the men and women that are in the Federal Aviation Administration, the men and 23 women that design airplanes, the men and women that 24

staff and operate airlines do their best to avoid what
 has happened.

We are learning through this process. 3 4 Certainly on one level, this event could be classified 5 as a loss of control of an aircraft in flight. That remains the most common form of aviation accident. 6 7 We are working hard, all of us in this community, and the results -- to eliminate that type of 8 9 accident and the results of this investigation will go 10 a long way, you know, towards making our skies safer. 11 Thank you very much. 12 MR. HAMMERSCHMIDT: Thank you for those 13 comments, and you may stand down. 14 (Whereupon, the witness was excused.) 15 MR. HAMMERSCHMIDT: Mr. Rodriguez, let me ask Are there any loose ends that we need to address 16 vou. 17 before we have a brief closing statement, from a housekeeping standpoint? 18 MR. RODRIGUEZ: No, sir. I will be in 19 contact with the parties with respect to additional 20 21 exhibits and things that have been entered during the 2.2 hearing, to ensure that all hands have the up-to-date 23 copies. Excellent. 24 MR. HAMMERSCHMIDT: Thank you.

With the last witness having been heard, this
 concludes this phase of the Safety Board's
 investigation.

4 In closing, I want to emphasize that this 5 investigation will remain open to receive at any time 6 new and pertinent information concerning the issues 7 presented.

8 The Board may, at its discretion, again 9 reopen the hearing in order that such information may 10 be part of the public record.

I would point out again that this hearing is only one part of the overall investigation. I would also caution those who are following this hearing not to conclude that the investigation is restricted to only what has been discussed during this four-day hearing.

17 The Board welcomes any information or 18 recommendations from the parties or the public which 19 may assist it in its efforts to ensure the safe 20 operation of commercial aircraft.

Any such recommendations should be sent to the National Transportation Safety Board, Washington, D.C. 20594, to Mr. Richard G. Rodriguez's attention. Normally, they should be received 30 days after the

1 receipt of the transcript of this hearing.

I'll repeat that. Normally, they should be
received 30 days after the receipt of the transcript of
this hearing.

5 All the evidence developed in this 6 investigation and hearing and all recommendations 7 received within the specified time will be presented 8 and evaluated in the Final Report on Alaska Airlines 9 Flight 261, in which the National Transportation Safety 10 Board's determination of the probable cause will be 11 stated.

12 On behalf of the National Transportation 13 Safety Board, I want to again thank the parties to the 14 hearing for their cooperation, not only during this 15 proceeding but also throughout the entire investigation 16 of this accident.

I believe we've come a considerable way since
the pre-hearing conference, and I certainly appreciate
everyone's efforts in that regard.

I want to express sincere appreciation to all those groups, persons, corporations and agencies who have provided their talents so willingly throughout this hearing.

Also, I would like to personally thank all

the Safety Board personnel for their professionalism
 and excellent work during and in preparation for this
 hearing.

I don't want to editorialize too much, but I thought many of the exhibits were exceptionally well done, and I want to thank -- that includes those on the Tech Panel who were here and those who were not in attendance at this moment, my colleagues here at the Board of Inquiry, and, of course, the Administrative staff. This has been a very good hearing.

11 Thanks also to all those here in the hearing 12 room for your interest and your support, and to 13 everyone on the West Coast who have been following this 14 hearing on closed-circuit television.

The record of the investigation, including the transcript of the hearing and all exhibits entered into the record, will become part of the Safety Board's public docket on this accident and will be available for inspection at the Board's Washington Office.

20 Anyone wanting to purchase the transcript, 21 including the Parties to the Investigation, may contact 22 the court reporter directly.

I now declare this hearing to be in recessindefinitely.

	(Whe	ereupo	n, at	8:00	p.m.,	the	public	hearing
was	adjourned	sine	die.)					
	was			(Whereupon, at was adjourned sine die.)				(Whereupon, at 8:00 p.m., the public was adjourned sine die.)