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## NEW APPROACHES TO SAFETY

ROBERT T. FRANCIS\*

*Introduction by Mr. Charles Tarpley: I could tell you a lot more about Bob Francis, but that would detract from the time that he has consented to spend with us. Without further comment, please an SMU Air Law Symposium welcome for Robert T. Francis.*

I thought I might talk a little bit about a subject that I guess a few people probably will be interested in. That is TWA, and maybe a little bit more personal reflection, and some public policy things, and then drift into some other things that I think are related. I might say I was reading the outline of David Bernard on the card in front of us here a few minutes ago. And he, as you know, died in a Pacific Southwest Airlines (PSA) accident in 1978. That was very, very shortly after I joined the FAA. I was doing congressional relations for the FAA at that point, and obviously that was a big accident, a major congressional and public issue. I am going to come back to the relevance of that again in a couple of minutes. But, it is interesting to see how things tie back around to you and you are not necessarily always aware of that.

When we got up to East Moriches, on the morning after the TWA crash, it was a madhouse. There were literally thousands of people that were at that Coast Guard station and no one was really in charge. Everyone was doing his thing, and everyone was doing his thing very well. The Coast Guard was doing theirs; the FBI had a role to play, the Suffolk County police, the New York City police, the state medical people, everyone was involved and being helpful, but there was a little bit of lack of direction, I guess. And obviously, as the NTSB is in charge of this, that was the first challenge.

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\* Vice Chairman, National Transportation Safety Board. This Speech is adapted from Mr. Francis's presentation at the *Journal of Air Law and Commerce's* Thirty-First Annual SMU Air Law Symposium on February 27-28, 1997.

We had an organizational meeting that evening. It included the people that you all know are parties to an investigation in our system. This is really wonderful to be here by the way; I do not have to explain the party system! So we had everyone in the room at the Air National Guard Station and had the organizational meeting. This included some parties that are not normally there, including the FBI.

About 9:30 the next morning, I got a call from Jim Kallstrom, who said, "Hey, you know, we have a problem with you guys; now what are we going to do about this?" And let me just say that Jim Kallstrom and I are very, very close friends, as a result of this. The press has made a big deal about the problems between the NTSB and the FBI. I would just say that for those of us who worked in the field on both sides, under Jim and with the NTSB on the other side, this has not been a big problem. I will illustrate to you sort of a small problem that we had, but everyone seems to think that we were steamrolled by the FBI, that we were always bashing heads and this is just not true. I think that if one looks at the relationship, one can always find folks that are in organizations and in large part, those can be in the headquarters of organizations who have their own parochial and not necessarily terribly broad vision of the world, who generate problems that the press like to talk about.

Anyway, to come back to that morning, Kallstrom said, "You know, we've got to get together." Well we got together. It turned out that one of the FBI guys who was supposed to be on the structures group was supposed to have gone out on the boat to the site at eight o'clock in the morning, but had missed the boat. And the long and the short was, that when we found out what had happened, it was a cultural and linguistic problem. The FBI guy was on the structures group and when all of our people—the traditional people that are parties—had decided what they were doing, this guy did not really understand what was going on and that he was supposed to be on the dock at eight o'clock in the morning, so he was left behind. Well, the FBI was sort of grumbling at us, and it turned out it was not really anyone's fault; it was just one of those things that happened. We had to go back and sort of say to the people that were involved with the investigation, "Make sure that when you are talking in the organizational and the progress group meetings, you are speaking English." Everybody has his acronyms, everybody has his slang, everybody has his way in which he discusses these things. If you suddenly inject someone who is not

from that community, you have to be careful that you are speaking English to him. So that was our first, certainly not a major crisis, and it was quickly resolved.

We then ended up with one in the other direction, where NTSB and some of the parties were grumbling to me about the fact that they could not take pictures of the wreckage as it was being brought in. It is a traditional thing that we do as you all know in an accident investigation, so we all talked about this. Obviously the TWA accident was, and still is, potentially a crime. And given that that is the case, there is a different level of dealing with evidence and controlling evidence. So, I went to Kallstrom and I said, "You know, we have this problem, our guys need photographs." And basically he said, "How many?" So I went back to our folks and to the parties, and said, "You know, you can't take pictures yourselves, and you can't run down to Snappy Photo and have them developed, and then bring them back and use them in the traditional way that you do. It does not meet the standard that the FBI has got to follow."

I said, "On the other hand, how many photographers do you need? We will get them for you, we will have them surgically attached, if you want, to you. They will take whatever pictures you want, they will develop them, and they will give you whatever you want, big, small, hundred, ten; whatever you want." So these are the kinds of things that we went through early, and I think that I would just say that as with all of this enormous effort, that the spirit was always cooperative.

You talk about the wonderful, wonderful people from the Navy and the Coast Guard, particularly the Navy divers, divers from the City of New York. You know everyone was trying to do his part and to do it well. And I think that when we look back at the history of this at some point that it is going to be one of the truly extraordinary things that we have been able to accomplish, and not making judgment on where we are now, the fact that we were able to recover ninety-whatever percent of that aircraft that we have, and 216 out of 230 victims out of 130 feet of water in the ocean is truly remarkable. I do not think there is another country in the world or another organization or anything else, who could even come close to doing this. And I think we should all be proud of it.

Let me talk just briefly about the role of the NTSB and families. I do not know where it started, but it certainly became an issue after the Pan Am 103 accident. For us it was an issue with ValuJet. We all are extraordinarily blessed to have a gentleman

named Peter Goelz who works for the NTSB who has a capability of giving of himself that is remarkable. And he did this with ValuJet and he continued it with TWA. And partially as a result of Peter's efforts, and partially as a result of what I consider to be an abdication on the part of the industry, we have ended up with executive direction and statutory direction to have a responsibility in this area. I would not have had it that way. I do not think that that really should have been a federal government function, but it is the kind of thing that happens when the industry does not step up to the plate. And I think that there would have been ways for the Air Transport Association of America (ATA), or whoever it is, to have done this and to have had teams that could have reacted in a responsible way and avoided this problem. The thing that I am really talking about here is responsibility in the day in which we live.

Let me come back to PSA and midair collisions. As you know, there has been an enormous history of collision avoidance systems. But, we now have TCAS II, particularly, which is an enormously effective anti-collision system. It is effective, not just for that, but also for lots of other things that pilots and controllers are finding that they can do with this system. It has not only safety benefits, but it also has economic benefits as well.

There is a pilot right down the street here, who is a captain for Southwest Airlines, and who did her Ph.D. thesis with Bob Helmreich at the University of Texas. And she can talk about what is happening in the air traffic control and piloting culture with TCAS, and how its being used by pilots to bring economies to their airlines. I have been involved over the last year with an effort to get all cargo carriers to put TCAS in their large aircraft. I think that there are lots of times when I felt like I was speaking Swahili, because I did not get very far with them. Maybe if I tried in French, in which I really am fluent, I could have done something. But we did not get very far. They have been doing some work in Automatic Dependent Surveillance-Broadcast (ADS-B), and I think a lot of us would agree that ADS-B someday is going to be a wonderful system. Nevertheless, it is not right around the corner and it is not going to be bringing us collision avoidance benefits in the next year or two years, or probably even five years. It is going to be a long time.

I argued with the cargo industry that installing TCAS II is something that makes enormous sense to do, and you are probably going to have to do it politically, because the idea that all cargo carriers are taking delivery of brand new 767Fs from the

Boeing Company without TCAS, to me, is outrageous. And the idea that they are purchasing aircraft in the civil fleet in the U.S., which are equipped with TCAS and are taking TCAS out, is equally ridiculous. I did not get very far. I said to them, "Why not come up with your own compliance schedule? You have eight hundred aircraft or whatever it is." Come up and say, "We are going to start taking our new aircraft with TCAS, and we are going to keep the TCAS in the aircraft we are purchasing and converting. We are going to have to, because the Asians and the Europeans have jumped ahead of us on this now. They are going to require TCAS in all aircraft flying into their airspace." We went to them many years ago and said, "You have to have TCAS in your aircraft coming into our airspace: passenger aircraft, heavy aircraft." Now they are coming back and saying, "Well, this system is so great, it should be in cargo aircraft as well." So they do not have the thirty seat exemption that the cargo guys operate under. So you are going to have to comply if you are going to Asia. You are going to have to comply if you are going to Europe. You can take new aircraft, you cannot take it out of old ones, and you can then come up with a schedule for C-checks or however you want to do it.

I think that will be friendlier than if you require an FAA rule-making process. And the United Parcel pilots have come in and petitioned the FAA for rule-making on this. Well, the day before yesterday, there was a Congressional hearing in Washington, and I testified about the installation of TCAS on cargo aircraft and we will see what happens. But I think something is going to come out of that, and I think, probably it is going to be something that is less friendly than if they had voluntarily decided to go ahead. We are in a political era where people want smaller government, they want smaller budgets, they want fewer bureaucrats, they want less paper. Well that is fine, and I am very much in favor of that, but I do think, and I would cite the case of the family responsibilities, and I would cite this case, as an obligation on the part of those who are the "regulated" to step forward some on this. You cannot just say that we are going to get rid of all those things if somebody in the sector being regulated is not willing to do his part and come halfway.

I had a meeting yesterday with Bob Crandall and Bob Baker of American Airlines, and we talked about this. You know, Bob Crandall was talking about some terrific stuff. He was saying "We should do it, the government should not be spending all this money. You know, we should get some guidelines and let us

spend the money. Let the carriers do it." This is not exactly what I expected to hear Bob Crandall saying, but I think that is the way that we should be going. We have to be thinking if we want to change this kind of equation; we have to be thinking about how we do that.

I was going to talk a little about Flight Operations Quality Assurance (FOQA) and partnership programs. I may be going on a little bit too long here. I am certainly willing to take questions. But I guess that I would say I am a great proponent of FOQA and partnership programs, and I think that it is part of this same sort of thing that I am talking about. You have to have better communications between the various groups. You have to have more volunteerism—you cannot just be sitting around waiting for the FAA to hammer you. You have to have programs that are trying to go upstream and look at what is happening in the system, so that we are preventing accidents, and not using accident investigation as the way in which we are monitoring the system. I think that there is a lot of change that must be made, and I think a lot is being made. There are a lot of airlines that are getting into FOQA and getting into partnership programs. Particularly in this group, I would understand that there are issues in terms of protection of data and everything else. But I do not think that these things are impossible to resolve. I think that people of goodwill can deal with these things. And I think that is the way that we need to be going. There has to be more working together and more trust. And I think there are examples where this is working and we can all continue to work on that.

So, if there are some questions, I will answer them. As for the probable cause on TWA, it might have to wait a few days.

*Audience: Do you happen to know Tony Broderick had actually laid down a gauntlet to the extent that he did yesterday. Would you be willing to tell us what your response to that might be?*

Mr. Francis: My response is that when Tony Broderick has an idea, I always listen. Tony Broderick is one of the smartest people I have ever know in my life, and I have known him for a long time. So I think that openness is always desirable and I think it is something we should be looking at.

*Audience: With respect to TWA 800, can you discuss the sources of ignition with respect to that circumstance?*

Mr. Francis: No. Obviously, that is what we are concerned about finding. We have not found it. We are doing a lot of work on that, however.

*Audience: Sir, with respect to the Board's new mandate, the Family Assistance Act, do you see any inherent conflict with the Board's other statutory mandates to determine or project probable causes in this new accident, the aircraft accident?*

Mr. Francis: I do not see an inherent conflict. I think that it is incumbent on us to be enormously careful about how we provide these two services, if you will, and to make sure that we do not get them mixed together. It is not easy, but I think, you know we have to do that.

*Audience: In regards to TWA, in terms of fuel vent system that is normally designed to operate in that tank, would the ignition source not be a moot point, as they say in this audience, if the venting system had been working?*

Mr. Francis: I do not want to speculate on that. I do not know quite frankly. I am not an engineer, and we are letting engineers and people that really know their stuff talk about that. I follow it, but not closely. As most of you know, when we have a major accident, the folks that work on it are the staff of the Board after the initial period. The initial period for the Board member to be involved has lasted a long time for some obviously unusual reasons in the TWA accident. One thing that I did learn about dealing with the press is that there are two things that you better be ready to do. One is to say that you do not know the answer, and the other is to say that you are not going to answer the question for whatever your reasons. Maybe I have combined the two with you. But do not be deterred; I am not shy to say it again.

*Audience: Could you comment on the difference of perspective, if any, you have experienced since switching from the FAA to NTSB?*

Mr. Francis: Yes. I was not really in the regulatory part of FAA, as many of you know. I was mostly involved in international, and it was a lot of liaison and working with the Aviation Matters Joint Aviation Authorities (JAA), working with Eurocontrol, international airlines, etc. The NTSB has the luxury of being a more deliberative body and I like that. I mean, you really for the most part have an ability to sit and think about things. It is almost judicial and beyond just that which is very judicial.

I think one of the things that one has to be careful with Tony's recommendations is that we do not bring the NTSB too close to doing things in exactly the same way that the FAA is doing them. We are for openness. At the same time one of the nice things about the Board is that we have a mandate to be fairly aggressive. You can look at the NTSB's B-737 recommendations, which I think at one point he described as highly aggressive. That was at the point after the Board had made the recommendations, but we do have that luxury, if you will, to push the envelope a little bit and I think that is good. They in turn have a different function and that is as the regulator to go through the rule-making process, and then to come back to us and say "yes," "no," "maybe," or "let's try here in between." So I think we want to be careful that we do not disturb the institutional balance, because I think the way that whoever set it up initially, was a smart cookie.

Well, thank you very much. It has been a pleasure being here.

# Comments

