

**Senator Maria Cantwell**

**Opening Statement at the U.S. Senate Committee on Commerce, Science and Transportation hearing titled, "Examining the Federal Aviation Administration Oversight of Aircraft Certification"**

**Witnesses: The Honorable Stephen Dickson, Administrator, Federal Aviation Administration; Mr. Michael Stumo, Father of Samya Rose Stumo, Victim of Ethiopian Airlines Flight T302**

**June 17, 2020**

CANTWELL: Thank you Chairman Wicker, and thank you for your statement. I want to say that as Ranking Member on our side of the aisle, we stand with you for any information requests and efforts to get the FAA to comply with what the majority has been requesting, so thank you for that statement. I want to take a moment to recognize the families who have lost loved ones in the Ethiopian Airlines and Lion Air tragedies. I can't imagine the loss and the pain that you are still feeling. I appreciate your vigilance, just as I've appreciated the vigilance of the Colgan Air families who often attend our hearing and comment of safety measures before the committee.

It can't be easy to continue that role, but we thank you for doing it. All of the voices in these efforts to make our skies safer are important. I also look forward to hearing the testimony of Michael Stumo. We have to get this right, for his daughter and the 346 victims of those crashes.

Today's discussion is about leadership, about restoring America's leadership in aviation safety. Safety is job one. It's job one in a critical sector that employs 2.5 million people—150,000 in the state of Washington—but safety is job one because it involves so many lives.

The leadership task begins with the FAA, and you, Administrator Dickson. We look forward to hearing how your efforts to build the FAA's oversight and capacity to improve safety in response to these two accidents have been undertaken. There have been numerous reports issued since the accidents, and unfortunately, the FAA response to a number of those investigations concerning the MAX seem more a rigid acceptance of the status quo than the needed changes that we want to see at the FAA.

No matter what the structure of the FAA, it must be clear that it is an independent agency with oversight of certification. We need to have the best workforce—which I believe we do, in the Northwest—but we must have experts and investigators that are qualified and technically trained at the FAA to oversee, in a sufficient manner, the compliance process.

Now, there's a lot of discussion about Wall Street and the approach to aviation of value engineering. I'm going to tell you something about the Northwest. The pride of the Northwest is about innovation and solid engineering, and solid engineering advancements. It is not about doing things on the quick, it is about doing things deliberately and getting safety right. And I want to see a certification process where we are listening to those engineers at the beginning of the process, who are calling out some of these safety issues.

The FAA management needs to be willing to back up those engineers on the ground who are calling out safety concerns at the earliest phases of the process, not at the end, and certainly not after certification.

The FAA's system of delegation dates back to 1958—actually it can be traced back to 1927, when private doctors were used to conduct pilot health checks in the Aeronautics Branch of the Department of Commerce. However, it was the FAA's own action taking authority in delegation of manufacturers for technical approvals that started in 2005 under the ODA [Organization Designation Authorization] system. Under this program, the industry engineers [were] acting on behalf of the FAA. These lines of oversight and communication were fragmented.

I believe—and I think the Chairman believes as well—we need a system of certification where hardworking engineers, and engineering safety, is driving the certification process, not the other way around. We can't have planes certified, and then after the certification, have them grounded because of unsafe features. A technical review by the international safety authorities, Joint Authority Technical Review (JATR), identified a number of problems with the ODA program and FAA oversight.

Specifically, the need for a more holistic review and the fact that engineering expertise needed to have open communication systems and the technical expertise level of those engineers needed to be there.

So Mr. Dickson, today I hope that we will hear about what the FAA believes needs to be reformed in this program. What reforms, of those suggested by Chairman Wicker and myself, do you support. I want to thank Chairman Wicker and his team, and my team, for working so collaboratively with us and their hard work in introducing this legislation that the Chairman just mentioned.

I believe it does fundamentally change the way the FAA oversees the certification of large commercial aircrafts. Specifically, our bill, the *Aircraft Safety and Certification Reform Act of 2020*, will revamp the ODA and make sure that the FAA stays in the driver's seat of certification.

Under our bill, FAA will once again be responsible for directly appointing and approving the engineers who are tasked with carrying out the certification on behalf of the Administrator. In addition, the FAA will assign safety advisors to closely monitor the performance of these designees, and we also create a new whistleblower protection to fortify the channels of communication and reporting safety. Critically, our bill will end any semblance of self-certification by repealing sections that would give the FAA additional authority for delegation under specific provisions.

Our bill also requires implementation of the NTSB recommendations on safety automation and pilot response, as well as safety management systems for aircraft manufacturers. I believe these new standards would address the issues of multiple flight alerts, and the need for pilot training. So I want to thank Senator Duckworth for her work with me on this legislation, *the Aviation Automation and Human Factors Safety Act*.

The FAA must keep pace with the skills, and have the technical capacity to handle an increasingly complex aircraft technology. Automation has certainly helped safety, but the amount of automation and uncontrolled commands and alerts can be confusing, particularly when you only have seconds to respond. So understanding the interactions between humans, technology, and operation environment is becoming more critical to safety in aviation. That is why the bill with Chairman Wicker also establishes a Center of Excellence for flight automation and human factors and creates an office, the FAA office of

continuing education and training, to make sure that those inspectors maintain and keep the expertise necessary to do the oversight that is required by the FAA.

We also need science and technical advisors to address these developing new technologies.

With technology changing, building skills is important, and I want to thank Senator Moran for introducing the *Foreign Civil Aviation Authority Assistance and Capacity-Building Act*, which will increase global pilot standards and FAA's bilateral [partnerships] to improve pilot training. The United States needs to be loud and clear that we want to see strong airmanship. That is to say, a pilot needs to be able to fly the plane without the automation.

And I hope that we, and you, will help lead that effort on an international basis. We also need a strong aviation workforce for the future, and that is why I've partnered with Senator Blunt with *The National Air Grant Fellowship Program Act of 2020*, which would create an aerospace policy fellowship, and leader for the future act.

It's clear the race for aviation around the globe is on. But we cannot have that race for competition drive us away from a solid safety and certification regime. The solution to that competition, I believe, is to hire and retain the best safety experts that we can find.

So I look forward to hearing the ways in which you believe the FAA needs to improve the process. Again, I want to thank Chairman Wicker for his leadership on the bill that we just introduced, and thank him for his focus on this issue. We do need to hold manufacturers accountable for compliance and safety standards through the process. I look forward to continuing to work with him on that. We need to have certain design features that we know are compliant with the airworthiness standard. No one wants to see a process where, at the end of the process, it's not clear that the data indicates actual compliance.

I will have many questions about this. So Mr. Dickson, today we are looking forward to the leadership that you will provide in addressing these issues. Safety has to be paramount, and the FAA has to be independent.

So thank you for being here, and I look forward to hearing from both our witnesses. Thank you Mr. Chairman.

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**Q&A with Administrator Dickson at the U.S. Senate Committee on Commerce, Science and Transportation hearing titled, "Examining the Federal Aviation Administration Oversight of Aircraft Certification"**

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CANTWELL: Thank you, Mr. Chairman. Administrator Dickson, I'd like to ask several questions just to get you on the record on changes that we'd like to see at the FAA, both in the legislation we've proposed and things that we think continue to need to be addressed beyond this legislation. So if you could help me out with as much "yes" and "no" that would be so helpful.

Should aircraft manufacturers be accountable for the compliance of design data submitted for FAA approval, yes or no?

DICKSON: Yes.

CANTWELL: Do you believe this accountability should exist throughout the certification process, not just at the end of certification process, when safety concerns are harder to address and designs tougher to rework and correct?

DICKSON: Without speaking to the specifics, I'm not knowledgeable of some of the details you're referring to, but I believe that the holistic approach that you referred to, that a safety management system would provide, would produce that result.

CANTWELL: So, the answer is yes?

DICKSON: Yes.

CANTWELL: Okay. Applicants must certify that design data complies with airworthiness standards. That's a good idea.

DICKSON: Yes.

CANTWELL: And if FAA receives a report of non-compliance, the FAA should ensure that corrective action is taken prior to issuing a certificate?

DICKSON: Yes.

CANTWELL: Okay. And if non-compliance is discovered after issuance of a certificate, do you believe the manufacturer should be required to correct it for future production of aircraft?

DICKSON: That's in the continuing operational safety realm and that's what our airworthiness directive provides for, yes.

CANTWELL: Okay. Well certainly I have concerns that that's not what's taken place in the past, and it's good to hear that that's what you think should take place now. I think the end result of aircraft certification process is—you know, it's the FAA approval of the Type Certificate, but we want to make sure that as we go through this process, and one of the failures of the 737 MAX which is just unacceptable, is that we need to make sure that that compliance and airworthiness requirements are met. So do you agree that the purpose of the aircraft certification is to achieve compliance?

DICKSON: Yes.

CANTWELL: Okay. And in order to achieve compliance, the FAA must validate that the manufacturer's design data is compliant with applicable airworthiness standards?

DICKSON: Yes, Senator. And I would say that—it's actually a higher bar than compliance. Compliance with individual rules does not necessarily produce a safe outcome, and that's what we're trying to deal with.

CANTWELL: Well I agree that from the holistic perspective, but I'm just trying to point out that the process that we have today between the beginning of the process on the Type Certificate and the final airworthiness approval, certainly in the MAX situation, didn't catch the problems, and certainly had information—so that's why this data and your questions and answers to that are so important and hopefully that will help us in moving forward on this legislation.

If I could ask you now about the bill that Senator Wicker and I introduced. Do you agree that in order to raise the bar, the FAA should be directly appointing these ODA members?

DICKSON: Senator, the—without commenting specifically on the bill, I think that we need to certainly take a systems approach, and we need to have strong oversight of the ODA. We already approved—

CANTWELL: Mr. Dickson, I'm not as genteel as the chairman—

DICKSON: I understand—

CANTWELL: --who resides in a state where genteel approaches exist and are perfected. I'm a little more blunt. Okay? So I don't want to be stonewalled here. Do you believe the FAA should retain and appoint these individuals and oversee them in the process, yes or no?

DICKSON: It's not something that—we certainly approve their qualifications and their background. The individual selection is not something that I believe would add to the safety of the process, but it is something that we are certainly anxious to work with the committee on and see if there's a way that we can add that in.

CANTWELL: Mr. Dickson, it's a little hard—I just have to view you through the lens here because of this gentleman. But this is the very point: we need an independent FAA. We need the lines of communication between these whistleblowers or whoever it is on the engineering—you know, the SPIA member who is on the ground—who says, "Look, this is a problem." He needs to be backed up by the FAA. But if you don't have a direct line to that employee, and you don't approve him in the final, and

you don't oversee his work, and you don't have the right expertise at the FAA, then he's not going to be backed up by you.

DICKSON: I could not agree more.

CANTWELL: Okay. Thank you. Thank you, Mr. Chairman.

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**Q&A with Mr. Michael Stumo at the U.S. Senate Committee on Commerce, Science and Transportation hearing titled, "Examining the Federal Aviation Administration Oversight of Aircraft Certification"**

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CANTWELL: Thank you, Mr. Chairman. And Mr. Stumo, thank you for being here and your wife as well, and again my condolences to you and all the families who've been impacted by this, and again my thanks for your continued oversight and communication on these issues. Because as I've said, I've seen with the Colgan Air families, that they have made an impact on what we've been able to do on safety, And so, I am sure that you will have the same impact. But nonetheless, a very painful experience to continue to focus on these issues, but I thank you.

I wanted to go over a couple of things about your testimony to ask further details on. I agree we need the FAA to remain in the driver's seat when it comes to the certification process, and that is what that legislation does, as you say, making sure that they have oversight over the employees and the process on a supervisory role and owning the system. That's what Chairman Wicker and I have also agreed to in the legislation. I was a little—I'm not a little—I was very surprised to hear the FAA administrator not fully support that concept today. Do you have any comments on that?

STUMO: We've seen a consistent set of reports from FAA including a 20—I think it was a 2017 air transformation report that's full of—and I refer to it in my written testimony—that it's full of management consulting baloney about goals and aspirations. But what it boils down to is a dedicated internal—it appears from the outside—a dedicated internal process that they're going to withdraw from the direct involvement in certification. Apparently that includes appointing, removing, and communicating with the Boeing engineers doing a public service, which is certification duties. So it seems to be deeply embedded.

And I was surprised, too, to see how resistant that the administrator was to the mere fact that, hey, why don't you just take a look at these folks? They're not appointing the janitor, the approved they can remove if they screw up, because we all know people screw up and you make an appointment and you wish you hadn't, and you have supervision that's going on in between. Because that's what we've heard from Boeing engineers that have been around in the DER system and the ODA system, that if—when—you have Boeing appointees only and they're siloed only on the Boeing side, the safety culture can get totally overwhelmed by the profit and timelines pressures, which always exist, but you've got no one else. You're a Boeing engineer, you've got to respond to the Boeing manager and you don't have the FAA's side, because you don't even know who they are. And the BASO office, the Boeing Aviation Safety

Oversight office, has 27 engineers that are supposedly overseeing 1,500 Boeing engineers, and all they can do is look at reams of paper that get delivered and put rubber stamps to them.

So there's something—delegation's been around a long time, but we've got to rebalance it in the way that your bill has stated. So I was indeed surprised.

CANTWELL: Thank you for that. I also—you know, I agree with you, and thank you for keeping bringing up those numbers as it relates to oversight office itself. Clearly our bill creates a new office of oversight saying exactly the right level of expertise and technology oversight that's required, and so hopefully that will be fixed. It's very frustrating to hear the administrator today not to embrace these things as fully, because it's very hard for us—I mean we can pass a law, but we're going to stay on top of the FAA. I can guarantee you that. So we're going to get the right workforce there.

I wanted to ask you, you mentioned this red team/blue team thing, which I think comes up in a couple of different ways, you know this idea of holistic approach. Do you think—I'm interested because of what you said about the NTSB—do you think that the NTSB and NASA could play a bigger role in the upfront part of the certification process when the Type Certificate is being considered, and these ideas or new technology is being considered? Do you think outside groups like that with experts at the front end of the process could better identify risks?

STUMO: I think it's very possible. I'm going to draw a little bit on what Javier De Luis, who lost his sister in the ET 302 crash said. Javier's an MIT aerospace engineer, he has submitted testimony today, and he has also said you need to have—getting a new aircraft designed and developed and certified is a major national event. And it takes—it's something that needs really all hands on deck, and he did indeed support the fact of having a multi-agency involvement at the beginning. In this case, we have a global duopoly of Boeing and Airbus. In our case, we have Boeing. But it's a public-private partnership. But along the lines, I understand that Javier had also supported that, given his deep knowledge at MIT and aerospace engineering. So I would tend to defer and agree.

CANTWELL: I see my time has expired, Mr. Chairman, thank you.

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CANTWELL: Thank you, Senator Blumenthal. Mr. Sumo, I want to follow up on a couple of things just quickly. I do have to run and vote in a minute, so if you see me dash out, it's because I think they'll probably be holding it just until I get there. I did want to ask—we also introduced a bill with Senator Moran today about the standards that we'd like to see on an international basis, and you mentioned Captain Sullenberger a couple of times so I wondered if you had given any thought to this larger issue of how do we make sure that the pilot—definitely need the FAA system improved, but also want pilot standards to be there, and if you've given any thoughts about that.

STUMO: Yeah, sure. The U.S. aviation system is inherently global. The Boeing planes are sold everywhere, families are riding everywhere, and it used to be that FAA's rules were a gold standard. But certainly how do you have, to the extent we improve here, how do you rightly have an extra territorial reach to what we do? Certainly the human factors approach, and I'd like—on the human factors it's all



about not excessive reliance on the human, which fallible to be the last, you know, last chance before, as one said, a smoking hole. Because you need the machine to be hardened and have redundancies in hardening so you're not like, "I'm going to make 5 mistakes before I go to bed tonight." Pilots make mistakes too, they have bad days. You can't rely on that. So you've got to have the machine right, too. I guess I'm in favor of doing as best we can to have an international reach for the bill, the flight aviation safety systems in Ethiopia and Kenya, and I think our Kenyan and Ethiopian families would agree it's not that great. Generally, I would be supportive.

CANTWELL: Thank you, Mr. Chairman, I've got to run.