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IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
FORT WORTH DIVISION

UNITED STATES OF AMERICA, ) CASE NO. 4:21-cr-00268-O-1  
  ) )  
Government, ) FORT WORTH, TEXAS  
  ) )  
VS. ) March 21, 2022  
  ) )  
MARK A. FORKNER, )  
  ) )  
Defendant. )

VOLUME 2  
TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE REED C. O'CONNOR  
UNITED STATES DISTRICT COURT JUDGE

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1 P R O C E E D I N G S

2 March 21, 2022

3 oOo

4 THE COURT: Okay. Please be seated.

5 All right. I've looked at you all's briefings,  
6 pleadings, the briefing that you all filed, and after  
7 reviewing it and listening to the opening statements, I've  
8 determined that disclosures to the FAA and internal FAA  
9 communications, as they were conveyed to Ms. Klein, are  
10 relevant to the extent that they show that the information  
11 at issue was material.

12 The government is correct that the communications  
13 are not probative of the defendant's intent. So for that  
14 reason, I find that a limiting instruction on the  
15 materiality in communications is appropriate and will  
16 instruct the jury to consider the communications for that  
17 purpose.

18 As it relates to the crashes, I find that brief  
19 information about them are relevant to the materiality of  
20 the information that Ms. Klein considered, and so I will  
21 permit limited discussion of the crashes for that purpose  
22 with her.

23 I will reserve judgment, though, on the  
24 admissibility of the defendant's expert witnesses until  
25 after the close of the government's case. So that's my

1 ruling.

2 MR. GERGER: Your Honor, and we would invoke the  
3 rule, but those two experts are in the courtroom, and I  
4 would ask that they be allowed to stay.

5 THE COURT: Yeah. Okay.

6 MR. JACOBS: Yeah, we would object to that, your  
7 Honor.

8 THE COURT: You object to which part?

9 MR. JACOBS: To having the witnesses stay in the  
10 courtroom.

11 THE COURT: Yes, the expert witnesses stay in the  
12 courtroom or?

13 MR. JACOBS: Except for the experts.

14 THE COURT: Yeah, right. I think that's what he  
15 said. So do you all have experts in the courtroom? Just go  
16 ahead and bring them.

17 MR. JACOBS: We do not, your Honor.

18 THE COURT: I mean, do you have witnesses in the  
19 courtroom?

20 MR. JACOBS: Not to my knowledge.

21 THE COURT: And do you have witnesses in the  
22 courtroom?

23 MR. GERGER: Only those two.

24 THE COURT: Okay. So --

25 MR. JACOBS: Your Honor, I just have the case

1 agent and the case agent will be at the table with us.

2 THE COURT: Yeah, right. That's okay. So what I  
3 will need you to do, then, is to communicate the rule to  
4 your witnesses so that they, from this point forward, are  
5 complying with the rule.

6 MR. JACOBS: Will do.

7 THE COURT: And you, too.

8 MR. GERGER: Yes, your Honor.

9 And then we all saw this morning's news about a  
10 737. It was not a MAX. I don't know if your Honor would  
11 instruct the jury it was not a MAX, but --

12 THE COURT: You tell me what you want. What is it  
13 that you request?

14 MR. GERGER: What should we ask --

15 THE COURT: Because they're on their way, so --

16 MR. KEARNEY: Just that it was not a MAX.

17 MR. GERGER: Just that it was not a MAX.

18 THE COURT: So I will tell the jury that there  
19 have been news reports that there has been an airplane  
20 crash, that tentative reports indicate that it may be a  
21 Boeing aircraft, but that it is not a 737 MAX airplane.

22 MR. GERGER: Thank you, your Honor.

23 MR. KEARNEY: Thank you, your Honor.

24 MR. JACOBS: No objection.

25 THE COURT: Do you have a witness?



1 MR. JACOBS: We do, your Honor.

2 THE COURT: Let's get him up here.

3 MR. JACOBS: Your Honor, may I just ask a few more  
4 things?

5 We also submitted to the Court the unopposed  
6 request for the motion for instruction from the Court to the  
7 jury about the plane crashes.

8 THE COURT: Yes.

9 MR. JACOBS: I'm just asking if you would consider  
10 perhaps giving that to the jury in this case?

11 THE COURT: I will do that right now.

12 MR. JACOBS: Thank you, your Honor.

13 And then the other thing that I would ask, too, is  
14 if your Honor would consider just letting the jury members  
15 know that when we see them in the hallway, around the  
16 courthouse and we don't talk to them, we're not trying to be  
17 rude.

18 THE COURT: Yes. I will do that right now.

19 MR. JACOBS: And then there's one other thing that  
20 we were talking to with the Court last week was the  
21 redaction to certain exhibits.

22 THE COURT: Yes.

23 MR. JACOBS: I think we've come to an agreement  
24 with respect to those redactions.

25 THE COURT: Very good. Just proceed. Just you

1 all act like that's acceptable with me.

2 MR. JACOBS: Thank you, your Honor.

3 THE COURT: Okay. So I will give those three  
4 instructions.

5 MR. JACOBS: Thank you, your Honor.

6 (The jury was brought into court.)

7 THE COURT: Okay. Please be seated. All right.  
8 Thank you all very much, ladies and gentlemen. Just a  
9 couple of housekeeping measures.

10 The first one is, there are a lot of people  
11 involved in this lawsuit, and you all will be coming and  
12 going at the end of the day and at the beginning of the day,  
13 at breaks, lunch, and so you may encounter people connected  
14 with this case during the day in your comings and your  
15 goings.

16 They are not going to even politely say, "Good  
17 morning," or, "How are you doing," or, "What about this  
18 weather?" They're going to act as if they don't know you,  
19 and they're going to pretend like they're from New York or  
20 somewhere where they don't exchange pleasantries, right?

21 Here we exchange pleasantries, even with people we  
22 don't know, but they're not going to do that in this case.  
23 So please don't take that as a sign of disrespect or  
24 discourteousness, because it's not that way at all. It's --  
25 everybody associated with this case is working very hard on

1 the case and wants to avoid even the appearance of  
2 impropriety.

3 And so, if someone were to see you exchanging  
4 pleasantries with someone involved in the case and they  
5 weren't involved in that conversation, they might be  
6 concerned that you're thinking -- that you're actually  
7 talking about the case and so that's why.

8 So if you see people in the hallway and they duck  
9 their heads and avoid eye contact with you or don't get on  
10 the elevator with you, that's the reason. And that's  
11 pursuant to my direction to the participants. That's not  
12 even something that they brought up. So please take note of  
13 that.

14 Second, there has been a report, a news report  
15 today, of an airplane crash that may or may not be a Boeing  
16 aircraft. These are preliminary reports. But what is  
17 certain, I think, that we all agree that it is not a 737  
18 MAX, which is what we're -- the subject matter that we are  
19 dealing with here in this courtroom.

20 Again, avoid all news coverage that might talk  
21 about airplanes and Boeing and this lawsuit, but you need to  
22 know that any report that has taken place today has nothing  
23 to do with the 737 MAX.

24 Anything else we should take up?

25 MR. JACOBS: Other than the two other charges.

1 THE COURT: No, I'm going into that.

2 MR. JACOBS: Thank you. Other than that, nothing  
3 on that.

4 THE COURT: Very good.

5 MR. JACOBS: Thank you.

6 THE COURT: All right. Now, the next instruction  
7 I need to give you is that in this lawsuit, the government  
8 does not allege that Mr. Forkner caused any plane crash.  
9 Mr. Forkner is not charged with causing any plane crash. He  
10 is charged with four counts of wire fraud.

11 Your job as jurors is to determine only whether  
12 the government has proved, beyond a reasonable doubt, that  
13 Mr. Forkner committed those wire fraud offenses.

14 And so, you are otherwise to follow my  
15 instructions as it relates to this case as we go forward,  
16 but keep that in mind as the evidence unfolds.

17 Now, finally, one of the things that you will be  
18 called upon to make a determination on is an element of wire  
19 fraud that is known as "materiality."

20 I will give you other instructions about all of  
21 the elements at the -- at the conclusion of the evidence,  
22 but I want you to remember -- and this will be in the final  
23 instructions that you get at the end of the day, at the end  
24 of the case.

25 But I want you to remember, as we go along, that

1 in determining materiality, you should consider that  
2 naiveté, carelessness, negligence, or stupidity of a victim  
3 does not excuse criminal conduct, if any, on the part of the  
4 defendant.

5 So please remember these instructions as we go  
6 through the case. And again, I'll repeat those to you,  
7 probably periodically, as we go through the case, but  
8 certainly in the final instructions that you get when you go  
9 back to deliberate on your verdict.

10 So thank you all for being here this morning. We  
11 are ready to go.

12 The Government can call its first witness.

13 MR. O'NEILL: Thank you, your Honor. The United  
14 States calls Kent Byers to the stand.

15 (The oath was administered.)

16 THE COURT: Be sure and speak up good and loud so  
17 everyone can hear what you're saying.

18 THE WITNESS: Yes, your Honor.

19 DIRECT EXAMINATION

20 BY MR. O'NEILL:

21 Q. Good morning.

22 A. Good morning.

23 Q. Would you please state your full name and spell it  
24 for the record?

25 A. Certainly. My name is Kent Byers. My name is

1 spelled K-e-n-t, last name B-y-e-r-s.

2 Q. Where do you work, sir?

3 A. I work for the U.S. Department of Transportation,  
4 Office of Inspector General, Midwestern Regional Office  
5 Investigations.

6 Q. And what is the Department of Transportation,  
7 Office of Inspector General?

8 A. So the Department of Transportation, Office of  
9 Inspection General, DOT OIG, as we often call it for short,  
10 is an agency charged with investigating allegations of  
11 fraud, waste, and abuse pertaining to DOT's programs,  
12 operations, and contracts and things of that nature.

13 Q. And, sir, if I could ask you to speak up a bit and  
14 maybe position yourself a little closer to the microphone so  
15 we can all hear you.

16 A. Sure.

17 Q. Thank you. That's better.

18 What is your job at the DOT OIG?

19 A. I'm a Special Agent, currently serving as the  
20 Assistant Special Agent in Charge, or ASAC.

21 Q. Would you please tell the jury a bit about your  
22 path to your current role as ASAC?

23 A. Sure. I started about 24-plus years ago as a  
24 special agent with a different agency, and then came to the  
25 Department of Transportation, Office of Inspector General in

1 2001, working a variety of investigations relating to fraud,  
2 waste, and abuse; particularly a lot of fraud cases.

3 And then, for the last three years, I've been  
4 serving as an ASAC supervising other agents and, you know,  
5 working with other law enforcement agencies as well, so --

6 Q. So you mentioned you work on fraud investigations.  
7 As part of your job, do you work on investigations of  
8 criminal fraud?

9 A. Yes, we do.

10 Q. Did you work on the criminal investigation of this  
11 case?

12 A. Yes.

13 Q. Did you work with any other federal law  
14 enforcement agents on this investigation?

15 A. We did, yes.

16 Q. Did you and your team collect documents as part of  
17 this investigation?

18 A. Yes.

19 MR. O'NEILL: Your Honor, may I approach the  
20 witness?

21 THE COURT: Yes.

22 BY MR. O'NEILL:

23 Q. Special Agent Byers, I've just handed you a binder  
24 of materials. Have you had a chance to review the contents  
25 of this binder before trial?

1 A. I have, yes.

2 Q. Does it contain documents?

3 A. It does.

4 Q. Did you and your team obtain all of these  
5 documents in the course of your investigation?

6 A. We did.

7 Q. Generally speaking, how did you obtain them?

8 A. So these documents were obtained by way of  
9 subpoena and record request, generally speaking.

10 Q. I would like to direct your attention in your  
11 binder, first, on a series of exhibits marked for  
12 identification -- and there are a number of them, so I will  
13 go through the series -- marked for identification as  
14 Government Exhibit 1.

15 A. Okay.

16 Q. Government Exhibit 2.

17 A. Yes.

18 Q. Government Exhibits 4 through 8.

19 A. Okay.

20 Q. Government Exhibit 10.

21 A. Okay.

22 Q. Government Exhibits 11 and 11A, as in "apple."

23 A. Okay.

24 Q. Government Exhibits 12 through 17.

25 A. Yes.



1 Q. Government Exhibit 19.

2 A. Yes.

3 Q. Government Exhibits 21 through 23.

4 A. Okay.

5 Q. Government Exhibit 26.

6 A. Okay.

7 Q. And last in this series, Government Exhibit 28  
8 through 30, all of which have previously been provided to  
9 the defense.

10 So generally, Special Agent, what are these  
11 exhibits?

12 A. So these are communications from -- or with  
13 Mr. Forkner.

14 Q. And are these communications from Mr. Forkner  
15 about the 737 MAX, just generally?

16 A. Yes. Generally, they're electronic communications  
17 with Mr. Forkner.

18 Q. When you say "electronic communications," does  
19 that include email messages and chat communications?

20 A. Yes, sir.

21 Q. And where did you get this series of documents  
22 from?

23 A. These documents came from The Boeing Company.

24 Q. Are they true and accurate copies of the documents  
25 that you received from Boeing in the course of your

1 investigation?

2 A. Yes.

3 MR. O'NEILL: At this time, we offer Government  
4 Exhibits 1, 2, 4 through 8, 10, 11, 11A, 12 through 17, 19,  
5 21 through 23, 26, and 28 through 30.

6 MS. MCFARLANE: Your Honor, no objection.

7 THE COURT: Those will be admitted.

8 (Government Exhibits 1, 2, 4-8, 10, 11, 11A, 12-17, 19,  
9 21-23, 26, and 28-30 were admitted into evidence.)

10 BY MR. O'NEILL:

11 Q. Special Agent, can I direct you to what's marked  
12 for identification as Government Exhibit 31 in your binder?  
13 Do you see that document?

14 A. Yes, sir.

15 Q. And this was also previously provided to defense.  
16 Are you familiar with this document?

17 A. I am.

18 Q. What is it?

19 A. This is an email from Mr. Forkner to Bob Waltz at  
20 Southwest Airlines.

21 Q. And where did you obtain this -- this email?

22 A. This email came from Southwest Airlines.

23 Q. Generally speaking, is it about the MAX?

24 A. Yes, it's an email about the MAX.

25 I'm sorry. Go ahead.

1 Q. That's all right.

2 A. I was just looking at the subject line, "AEG and  
3 MCAS," but it pertains to the MAX.

4 Q. And is a true and accurate copy of the document  
5 you received from Southwest?

6 A. It is.

7 MR. O'NEILL: We offer Government Exhibit 31.

8 MS. MCFARLANE: No objection, your Honor.

9 THE COURT: Thirty-one will be admitted.

10 (Government Exhibit 31 was admitted into evidence.)

11 BY MR. O'NEILL:

12 Q. Special Agent, I'm now directing you to what's  
13 been marked for identification as Government Exhibit 32A, as  
14 in "apple", in your binder. Do you see that?

15 A. Yes, sir.

16 Q. Are you familiar with this document?

17 A. I am.

18 Q. Generally speaking, what is it?

19 A. So this is a purchase agreement, or a letter  
20 agreement, between The Boeing Company and Southwest  
21 Airlines.

22 Q. And this was also previously provided to the  
23 Defense.

24 Special Agent, did you obtain this document from  
25 The Boeing Company?

1 A. Yes.

2 Q. Is it a true and accurate copy of the document you  
3 received from Boeing in the course of your investigation?

4 A. It is.

5 MR. O'NEILL: We offer Government Exhibit 32A.

6 MS. MCFARLANE: No objection, your Honor.

7 THE COURT: It will be admitted.

8 (Government Exhibit 32A was admitted into  
9 evidence.)

10 BY MR. O'NEILL:

11 Q. And finally, Special Agent Byers, direct your  
12 attention to what are marked for identification and  
13 previously provided to the Defense as Government Exhibits  
14 101, 102, 103, and 104. Do you see those documents in your  
15 binder?

16 A. I do.

17 Q. Are you generally familiar with each of these  
18 documents?

19 A. I am, yes.

20 Q. What are they, generally speaking?

21 A. So these are, generally, electronic communications  
22 from The Boeing Company to -- to the airlines regarding,  
23 well, sending invoices for the MAX.

24 Q. And when you say "the airlines," are Government  
25 Exhibits 101 and 102 communications from The Boeing Company

1 to American Airlines?

2 A. They are, yes.

3 Q. And 103 and 104, are those communications from The  
4 Boeing Company to Southwest Airlines?

5 A. Yes.

6 Q. Okay. And do they relate to the MAX?

7 A. They do.

8 Q. Did you obtain these electronic messages and their  
9 attachments from The Boeing Company?

10 A. Yes.

11 Q. Are they true and accurate copies of the materials  
12 you received?

13 A. Yes.

14 MR. O'NEILL: At this time, we offer Government  
15 Exhibit 101, 102, 103, and 104.

16 MS. MCFARLANE: No objection, your Honor.

17 THE COURT: That will be admitted.

18 (Government Exhibits 101-104 were admitted into  
19 evidence.)

20 BY MR. O'NEILL:

21 Q. Special Agent Byers, let's discuss some of the  
22 defendant's communications about the 737 MAX.

23 A. Okay.

24 Q. Did you review communications of the defendant's  
25 about something called Level B differences training and

1 Southwest Airlines?

2 A. Yes.

3 MR. O'NEILL: If we could turn to what's in  
4 evidence as Government Exhibit 1, if we could please publish  
5 this on the screen, Ms. Holbrook.

6 BY MR. O'NEILL:

7 Q. Looking at what's in evidence on your screen,  
8 Special Agent, as Government Exhibit 1, are you familiar  
9 with this email from the defendant?

10 A. I am, yes.

11 MR. O'NEILL: If we could please call out the  
12 date, Ms. Holbrook.

13 BY MR. O'NEILL:

14 Q. What is the date of this email?

15 A. The date of the email is May 21 of 2014.

16 Q. It's a three-page email. I would like to focus on  
17 what the defendant writes at 8:55 a.m.

18 MR. O'NEILL: If we could please call out that  
19 portion of the message, Ms. Holbrook.

20 BY MR. O'NEILL:

21 Q. Special Agent, is the defendant responding to a  
22 Boeing colleague in this message?

23 A. Yes, sir, he is.

24 Q. What does the defendant write about a \$1 million  
25 penalty, here in the highlighted text?

1           A.     Sure.  He stated, with a \$1 million penalty per  
2 airplane written to the -- into the SWA sales contract, via  
3 CSID letter, as I understand, if the training level  
4 difference goes beyond Level B, I'm guessing that's not a  
5 viable plan.  Not to mention many of the design decisions  
6 for the MAX were specifically -- made specifically to  
7 protect Level B.

8           Q.     And Special Agent, do you see here where the  
9 defendant uses the initials "SWA"?

10          A.     Yes, sir.

11          Q.     Are you familiar with those initials?

12          A.     I am.

13          Q.     In the context of this message, what does "SWA"  
14 mean?

15          A.     Southwest Airlines.

16                MR. O'NEILL:  If we could please turn to what's in  
17 evidence as Government Exhibit 4, and if we could publish  
18 that for the jury, please.

19 BY MR. O'NEILL:

20          Q.     Are you familiar with this email from the  
21 defendant?

22          A.     Yes.

23          Q.     What's the date of this email?

24          A.     The date of this email is September 15 of 2014.

25          Q.     And does the subject of the defendant's email

1 reference the MAX?

2 A. It does.

3 MR. O'NEILL: And if we could, Ms. Holbrook, go up  
4 the content of the message, please.

5 BY MR. O'NEILL:

6 Q. And Special Agent, does the -- does the defendant  
7 also use the initials Southwest Airlines -- the initials for  
8 Southwest Airlines in this message?

9 A. Yes, he does.

10 Q. What does the defendant write about Level B and  
11 Southwest Airlines in the highlighted text?

12 A. He wrote, "One of the prime program directives is  
13 that the NG to MAX differences training level cannot exceed  
14 Level B CBT."

15 He went on to state, "If Level B or C or D  
16 training is triggered, it results in a financial penalty to  
17 the company, per the sales contract with SWA, at a minimum."

18 And in parentheses, "There may be other contracts  
19 I am not aware of with a similar penalty."

20 MR. O'NEILL: If we could please turn to and  
21 publish what's in evidence as Government Exhibit 8.

22 BY MR. O'NEILL:

23 Q. Special Agent, are you familiar with this email  
24 from the defendant?

25 A. Yes, sir.



1 Q. What is the date of this email?

2 A. The date of this email is April 8 of 2015.

3 Q. And what is the subject line of defendant's email?

4 A. "Financial Impact of Risk 218 Level B Diff  
5 Training."

6 Q. You mentioned it's a message forward from the  
7 defendant. Is that right?

8 A. Correct, yes.

9 Q. I would like to focus here on the top part of the  
10 email chain focusing on the defendant's message. Does he  
11 again use the initial "SWA" for "Southwest" in this email?

12 A. Yes, sir, it appears so.

13 Q. And focusing here on the highlighted text, what  
14 does the defendant write about determining the financial  
15 impacts of greater than Level B?

16 A. Sure. So he wrote, "Frankly, that number is so  
17 big, and the nonfinancial impacts are so bad, that to try to  
18 determine a number is a waste of time, in my opinion,  
19 especially as widely variable as that cost will be from  
20 customer to customer" -- "besides Southwest Airlines," in  
21 parentheses. "We must obtain Level B for RCAS and the NG to  
22 MAX differences, or it's a planet killer."

23 Q. Special Agent Byers, in addition to those  
24 communications from the defendant about Level B and  
25 Southwest Airlines that we just saw, did you also review

1 communications from the defendant about Level B differences  
2 training, more generally?

3 A. Yes.

4 Q. Let's start with what the defendant wrote about  
5 Level B in 2014.

6 MR. O'NEILL: If we could please turn to and  
7 publish what's in evidence as Government Exhibit 2.

8 BY MR. O'NEILL:

9 Q. Are you familiar with this email from the  
10 defendant?

11 A. Yes, sir.

12 Q. What is the date of the message?

13 A. The date of this message is May 23 of 2014.

14 Q. And this is another multipage email. Let's focus  
15 on the top part of the chain from the defendant here at  
16 10:48 p.m.

17 A. Okay.

18 Q. Is the defendant responding to a colleague's  
19 message here?

20 A. Yes, sir.

21 Q. What does the defendant write about Level B in the  
22 highlighted text?

23 A. He wrote, "In the current environment we're  
24 dealing with, with regards to the AEG and training-level  
25 differences, I have to assume that even a small change in a

1 memory item may trigger a level beyond a Level B."

2 He went on -- pardon me -- to state, "Protecting  
3 Level B differences training is a primary ground rule for  
4 the program."

5 Q. And you mention that the defendant is  
6 communicating with colleagues in these messages. Where does  
7 the defendant and his colleagues work at the time?

8 A. The Boeing Company.

9 MR. O'NEILL: If we could please turn to and  
10 publish government Exhibit 5.

11 BY MR. O'NEILL:

12 Q. Are you familiar with this email from the  
13 defendant?

14 A. Yes, sir.

15 Q. What's the date?

16 A. The date on this one is December 18 of 2014.

17 Q. It's a two-page email chain here. Who is the  
18 defendant emailing?

19 A. A colleague at Boeing.

20 Q. Is that someone named Ross Chamberlain?

21 A. Yes, sir.

22 Q. Do you see toward the bottom of this first page  
23 there is some discussion between the defendant and  
24 Mr. Chamberlain about not getting a second interview. Do  
25 you see that?

1 A. Yes, sir.

2 Q. And do you see where Mr. Chamberlain writes at  
3 12:24 p.m., "After the MAX is done, you will be able to  
4 write your own ticket"?

5 A. Yes.

6 Q. What does the defendant write in response?

7 A. He wrote, "Except, of course, if we lose Level B,  
8 which will be thrown squarely on my shoulders. It was Mark,  
9 yes, Mark, who cost Boeing tens of millions of dollars.  
10 Burn him at the stake. Oh, well. Someone will have to  
11 pay."

12 Q. What does the defendant say would cost Boeing tens  
13 of millions of dollars?

14 A. Mark, himself.

15 Q. If we lose what?

16 A. Level B training differences.

17 MR. O'NEILL: If we can take that down,  
18 Ms. Holbrook. Thank you.

19 BY MR. O'NEILL:

20 Q. Special Agent, did the defendant continue writing  
21 about Level B differences training into 2015?

22 A. He did, yes.

23 MR. O'NEILL: Let's turn to, please, and publish  
24 Government Exhibit 6.

25 ///

1 BY MR. O'NEILL:

2 Q. Are you familiar with this email from the  
3 defendant?

4 A. Yes, sir.

5 Q. What's the date of the message?

6 A. The date of this message is February 5th of 2015.

7 Q. This is another multipage email with a number of  
8 people. Generally, do they work for The Boeing Company?

9 A. Yes, they do.

10 Q. Do you see they're emailing about potential  
11 differences between the 737 NG and MAX?

12 A. Yes.

13 Q. Let's focus on the top email here at 11:29 a.m.  
14 from the defendant.

15 What does the defendant write to his colleague in  
16 the highlighted part about Level B differences training?

17 A. He wrote, "I can say that from a training  
18 certification perspective, every difference between the NG  
19 and the MAX is being scrutinized heavily by the FAA AEG, who  
20 makes the training level determination. Each new difference  
21 represents a threat to obtaining no greater than Level B CBT  
22 differences training between the NG and MAX. If this  
23 happens, big financial penalties occur."

24 MR. O'NEILL: If we could turn to and publish  
25 Government Exhibit 7.

1 BY MR. O'NEILL:

2 Q. Are you familiar with this email from the  
3 defendant?

4 A. Yes, I am.

5 Q. What's the date of the defendant's message?

6 A. March 2nd of 2015.

7 Q. And again, it's a multipage email thread.

8 Focusing on the defendant's top message at 4:33 p.m., what  
9 does he write in the highlighted text about Level B?

10 A. He wrote, "One of the program directives is to  
11 minimize system differences between NG and MAX to preserve  
12 Level B training differences at all costs. Each new change  
13 difference jeopardizes that directive."

14 MR. O'NEILL: If we could please turn to and  
15 publish Government Exhibit 12.

16 BY MR. O'NEILL:

17 Q. Are you familiar with this email from the  
18 defendant?

19 A. Yes.

20 Q. What's the date of his message?

21 A. The date of this message is March 8 of 2016.

22 Q. And what is the subject of the defendant's email?

23 A. "Flight Controls SB Review."

24 Q. What does the defendant write about flight  
25 controls and Level B here in the highlighted text?

1           A.    He wrote, "Here's the flight control module,  
2 updated with a thorough review by the flight control  
3 engineers. This module is, of course, the big one for us.  
4 This material poses the greatest threat to Level B, so let's  
5 be thorough and strategic about stressing either how similar  
6 the MAX is to the NG and/or how the new functionalities are  
7 transparent to the flight crew."

8           Q.    Mr. Forkner's email references a flight controls  
9 module. Do you see that?

10          A.    Yes, sir.

11          Q.    Does he attach that document to the message?

12          A.    Yes. There's a -- there's an attachment.

13               MR. O'NEILL: Ms. Holbrook, if we could please  
14 turn to the attachment of this Exhibit, page 7 of 13. And  
15 if we could please call out the header in the top of this.

16 BY MR. O'NEILL:

17          Q.    Special Agent, what is the title, or header, of  
18 this page in the attachment to Mr. Forkner's email?

19          A.    "737 Flight Controls NG MAX Differences."

20               MR. O'NEILL: And if we could please call out the  
21 last row on this page, Miss Holbrook.

22 BY MR. O'NEILL:

23          Q.    Special Agent, do you see here on this page under  
24 "Flight Controls" something called "Maneuvering  
25 Characteristics Augmentation Systems," or "MCAS" for short?

1 A. Yes, sir.

2 Q. In the context of this attachment, is MCAS  
3 referenced as part of flight controls?

4 A. Yes.

5 MR. O'NEILL: So looking back at the defendant's  
6 if we could go back to that, Ms. Holbrook, and looking at  
7 this page together.

8 BY MR. O'NEILL:

9 Q. So in the defendant's own words, what material  
10 posed the greatest threat to Level B?

11 A. Flight controls.

12 Q. Flight controls including what?

13 A. Including MCAS.

14 MS. MCFARLANE: Objection, your Honor. Misstating  
15 the evidence.

16 THE COURT: Okay. The jury will recall the  
17 evidence, and you will make the determination on what was  
18 said and what was meant in all of this.

19 MR. O'NEILL: Thank you, your Honor.

20 If we could please turn to and publish government  
21 Exhibit 14.

22 BY MR. O'NEILL:

23 Q. Special Agent, are you familiar with this email  
24 from the defendant?

25 A. I am, yes.



1 Q. Generally, who is he write -- who is he writing to  
2 in this message?

3 A. This message is with colleagues.

4 Q. And colleagues -- colleagues at The Boeing  
5 Company?

6 A. At The Boeing Company, yes.

7 Q. What is the date of this message to his Boeing  
8 colleagues?

9 A. This was May 20th of 2016.

10 Q. Does the subject of the defendant's message  
11 reference 737 MAX differences training?

12 A. Yes.

13 Q. What does the defendant write to his Boeing  
14 colleagues here about Level B here in the highlighted  
15 portion of the message?

16 A. He wrote, "There is no backup plan if we don't get  
17 Level B. We're going to get Level B. The program won't  
18 allow anything but that to happen."

19 MR. O'NEILL: And if we could please turn to and  
20 publish government Exhibit 15.

21 BY MR. O'NEILL:

22 Q. What's the date of this email from the defendant?

23 A. June 14 of 2016.

24 Q. What does the defendant write in the highlighted  
25 portion here about his job and work?

1           A.    He wrote, "My job is insanely busy. The airplane  
2 certification project I've been working on for two years is  
3 coming to a head this August with the AEG. If I pull this  
4 off, I will be a hero. If not, they'll string me up on a  
5 flag pole for the world to see."

6           Q.    Who did the defendant say that the airplane  
7 certification project he'd been working on was with?

8           A.    The AEG.

9           Q.    When did the defendant say that his project was  
10 coming to a head?

11          A.    In August.

12          Q.    And in the context of this message, August of what  
13 year?

14          A.    Of 2016.

15               MR. O'NEILL: Let's turn to and publish  
16 Exhibit 16.

17 BY MR. O'NEILL:

18          Q.    Are you familiar with this email chain from the  
19 defendant?

20          A.    Yes, sir. I am.

21          Q.    It's a two-page chain. Let's walk it -- walk  
22 through it from the bottom up.

23               First, what's the date of the defendant's first  
24 message here?

25          A.    The date is August 16 of 2016.

1 Q. And the defendant's writing to a bunch of folks  
2 here. At a high level, who is he writing to?

3 A. These are folks within The Boeing Company.

4 Q. What's the subject of the defendant's email to his  
5 Boeing colleagues?

6 A. The subject was, "MAX Differences Training Level"  
7 [sic] -- or "Training Approved at Level B," and then a whole  
8 bunch of exclamation points.

9 MR. O'NEILL: If we could turn to the next page,  
10 please, Ms. Holbrook, which is the body of defendant's  
11 message. If we could call out the message, please.

12 BY MR. O'NEILL:

13 Q. What does the defendant write here in the  
14 highlighted portion about Level B and the MAX?

15 A. He wrote, "I'm happy to inform you that we  
16 successfully passed the T3 differences training validation  
17 flight today, establishing the 737 MAX as the same type  
18 rating as the 737 NG and requiring no greater than Level B  
19 computer-based training (CBT) differences training between  
20 the two. This is provisional approval pending final Part 25  
21 type certification and assuming no significant systems  
22 changes on the airplane."

23 Q. And who does the defendant say in this message  
24 would provide this provisional Level B approval?

25 A. The FAA.

1 Q. Working our way back up through the email thread,  
2 here, Special Agent, do you see that somebody named Keith  
3 Leverkusuhn replies to the defendant at 5:24 p.m.?

4 A. Yes, sir.

5 MR. O'NEILL: If we could focus on that message,  
6 please, Ms. Holbrook.

7 BY MR. O'NEILL:

8 Q. What does Mr. Leverkusuhn write to the defendant and  
9 others?

10 A. He wrote, "Fantastic news, Mark. Just a huge win  
11 for the team, for Boeing, and our customers. Thanks so much  
12 for your leadership on what I'm sure has been a long,  
13 strange trip. We can now eliminate the longest-standing  
14 risk on the MAX program. Thanks again, Mark. Well, done."

15 MR. O'NEILL: If we could zoom back out, please.

16 BY MR. O'NEILL:

17 Q. Does the defendant forward Mr. Leverkusuhn's  
18 thank-you message to a smaller group?

19 A. Yes, he does.

20 Q. What does he write when forwarding this chain to  
21 the smaller group?

22 A. He wrote, "Program is very happy. See below."

23 Q. And, again, is Mr. Forkner forwarding this message  
24 to his colleagues at Boeing?

25 A. He is, yes.

1 MR. O'NEILL: Let's go to and publish Government  
2 Exhibit 17, please.

3 BY MR. O'NEILL:

4 Q. Are you familiar with this email from the  
5 defendant?

6 A. Yes.

7 Q. What's the date of the defendant's message?

8 A. August 16 of 2016.

9 Q. Is that the exact same date as the email chain we  
10 just saw?

11 A. Yes, it is.

12 Q. Is this essentially another branch or thread of  
13 that same email chain?

14 A. Yes. It appears so.

15 Q. At the top of this email chain in Government  
16 Exhibit 17, what did the defendant write to someone named  
17 Stephen Taylor?

18 And if we could focus on the highlighted text here  
19 at the top.

20 A. Sure. He wrote, "I would like to discuss the 787  
21 chief tech pilot position with you when you're free, Steve.  
22 I'm wondering if it might be the best thing for both myself  
23 and the whole flight tech team now that we've achieved Level  
24 B."

25 Q. Special Agent, in the context of the defendant's

1 message, what is the 787 chief tech pilot position?

2 A. It is a position that he's not in right now. It's  
3 a different position. It's on a different aircraft.

4 Q. And is this -- the 787, in the context of this  
5 message, does that refer to a different aircraft than the  
6 737 MAX?

7 A. Yes, it does.

8 Q. So I think you mentioned this, but would that be a  
9 different position than the defendant's position on the  
10 737 --

11 A. Yes.

12 Q. -- at the end of this message?

13 A. Yes.

14 Q. What did the defendant tell Mr. Taylor here about  
15 that position the same day that he wrote about achieving  
16 Level B MAX?

17 A. That he thought it might be the best thing for  
18 both himself and the whole flight tech team.

19 Q. And now that we achieved what?

20 A. Now that they've achieved Level B.

21 MR. O'NEILL: If we could take that down, please,  
22 Ms. Holbrook.

23 BY MR. O'NEILL:

24 Q. Special Agent Byers, did you review communications  
25 from the defendant after he wrote about provisional Level B

1 for the MAX?

2 A. Yes.

3 MR. O'NEILL: Let's publish, please, Government  
4 Exhibit 19.

5 BY MR. O'NEILL:

6 Q. Are you familiar with this email from the  
7 defendant?

8 A. I am, yes.

9 Q. What's the date of his email?

10 A. This email was dated November 3rd of 2016.

11 Q. Who's he writing to in this message?

12 A. This is a message to colleagues at The Boeing  
13 Company.

14 Q. And November 3, 2016, is that a couple of months  
15 after the defendant's August 26th email about provisional  
16 Level B?

17 A. Yes.

18 Q. What does the defendant write to his Boeing  
19 colleagues here in the highlighted portion of the message?

20 A. He wrote, "Remember, we only have provisional  
21 approval for Level B and for the CBT, as presented to the  
22 regulators. This would be an appreciable change to both the  
23 airplane and the training that would risk our Level B  
24 determination."

25 MR. O'NEILL: And if we could please turn to and

1 publish Government Exhibit 21.

2 BY MR. O'NEILL:

3 Q. Special Agent, are you familiar with this email  
4 from the defendant?

5 A. Yes.

6 Q. What's the date of the message?

7 A. The date of this message was November 10 of 2016.

8 Q. So is that about a week after the email we just  
9 saw where the defendant reminds his colleagues that they  
10 only have provisional Level B?

11 A. Approximately, yes.

12 Q. Does the subject line here refer to the 737 Max?

13 A. It does.

14 Q. This is another multipage email from the defendant  
15 and others. Let's focus on page 2, please.

16 MR. O'NEILL: If we could call out this message  
17 here and focus on the highlighted portion.

18 BY MR. O'NEILL:

19 Q. In this message, does the defendant appear to be  
20 writing about a system on the MAX?

21 A. Yes.

22 Q. What does the defendant write in the highlighted  
23 portion of this message?

24 A. He wrote, "This, of course, creates a massive  
25 threat to the differences training. One of the program



1 directives we were given was to not create any differences  
2 in memory items. This is what we sold to the regulators who  
3 have already granted us the Level B differences  
4 determination. To go back to them now and tell them that  
5 there is, in fact, a difference in how you must operate the  
6 MAX during an emergency descent would be a huge threat to  
7 that differences training determination."

8 Q. What does the defendant write was one of the  
9 program directives we were given?

10 A. Level B.

11 Q. Who does the defendant say that this was "sold to"  
12 in this message?

13 A. The regulators.

14 Q. Now, here, on November 10, 2016, what does the  
15 defendant write about going back to the regulators now and  
16 telling them there is, in fact, a difference on the MAX?

17 A. He wrote that would be a huge threat to that  
18 differences training determination.

19 MR. O'NEILL: Let's turn to and publish Government  
20 Exhibit 22, please.

21 BY MR. O'NEILL:

22 Q. Special Agent Byers, are you familiar with this  
23 chat communication from the defendant?

24 A. Yes, sir.

25 MR. O'NEILL: If we could call out the header,

1 please, Ms. Holbrook.

2 BY MR. O'NEILL:

3 Q. First, what is the date of this chat?

4 A. This is a chat dated November 15 of 2016.

5 Q. So this is about five days after the chat -- the  
6 email we just saw?

7 A. Yes.

8 Q. Who is the defendant communicating with in this  
9 chat?

10 A. Mr. Gustavsson, who is a colleague of his.

11 Q. Colleague at Boeing?

12 A. At Boeing, yes.

13 Q. And it is a two-page message, a chat  
14 communication.

15 MR. O'NEILL: If we could look at both pages  
16 together and call out what Mr. Gustavsson and the defendant  
17 wrote to each other. And let's focus on what they started  
18 writing at 6:50 p.m. down to 6:53 p.m., Ms. Holbrook.

19 BY MR. O'NEILL:

20 Q. Special Agent Byers, could you please read this  
21 part of the defendant's back-and-forth with Mr. Gustavsson?  
22 If you could just start on the left here with the  
23 defendant's message starting the 6:50 all the way down  
24 through Mr. Gustavsson's message at 6:51.

25 A. Mr. Forkner stated, "Oh, shocker alert. MCAS is

1 now active down to M.2. It is running rampant in the sim on  
2 me, at least that's what Vince thinks is happening."

3 Mr. Gustavsson responded stating, "Oh, great.  
4 That means we must update the speed trim description  
5 involved to."

6 At which point, Mr. Forkner responded, "So I  
7 basically lied to the regulators (unknowingly)."

8 And then Mr. Gustavsson responds to him, "It  
9 wasn't a lie. No one told us that was the case."

10 Q. Okay. Now, when the defendant writes at  
11 6:50 p.m., "Oh, shocker alert. MCAS is now active down to  
12 M.2," what does "M.2" refer to in the context of this chat?

13 A. Mach .2.

14 Q. Just generally, what does the term "Mach" mean?

15 A. Mach is a measurement of speed.

16 Q. And then one line down, the defendant references,  
17 "It's running rampant in the sim on me," s-i-m. In the  
18 context of this chat, what do you understand "sim" to mean?

19 A. Flight simulator.

20 Q. And then when the defendant -- what does the  
21 defendant write here with respect to regulators, at  
22 6:51 p.m.?

23 A. He wrote that he basically lied to the regulators  
24 unknowingly.

25 Q. Based on the context of this chat and the emails

1 we just saw, which regulators was the defendant referring  
2 to?

3 MS. MCFARLANE: Objection. Speculation.

4 THE COURT: Do you know which regulator?

5 THE WITNESS: Based on the context of other  
6 emails.

7 THE COURT: Okay. Overruled.

8 You can answer the question.

9 THE WITNESS: Okay. The FAA AEG.

10 BY MR. O'NEILL:

11 Q. So when the chat continues, and Mr. Gustavsson  
12 writes, "It wasn't a lie. No one told us that was the  
13 case," how does the defendant respond?

14 A. He responds at 6:51 stating, "I'm leveling off at,  
15 like, 4,000 feet, 230 knots, and the plane is trimming  
16 itself like crazy. I'm like, what?"

17 Q. And then Mr. Gustavsson writes, "That's what I saw  
18 on sim 1, but on approach. I think that's wrong."

19 How does the defendant respond?

20 A. He responds stated, "Granted, I suck at flying,  
21 but even this was egregious."

22 Q. And Mr. Gustavsson continues, "No. I think we  
23 need aero to confirm what it's supposed to be doing."

24 How does the defendant respond?

25 A. He responds stating, "Vince is going to get me

1 some spreadsheet table to that shows when it's supposed to  
2 kick in. Why are we just now hearing about this?"

3 Q. Special Agent Byers, did you review emails from  
4 the defendant about something called the "Flight  
5 Standardization Board," or "FSB"?

6 A. Yes, sir.

7 MR. O'NEILL: If we could please publish what's in  
8 evidence as Government Exhibit 28.

9 BY MR. O'NEILL:

10 Q. Are you familiar with this email from the  
11 defendant?

12 A. Yes.

13 Q. What is the date of the defendant's email?

14 A. The date of this email was July 7 of 2017.

15 Q. Is that about eight months after the November 15,  
16 2016, shocker alert chat that we just saw?

17 A. Yes, sir.

18 Q. What's the subject of this email from the  
19 defendant?

20 A. The subject was regarding the FSB report.

21 Q. And at a high level, who was the defendant writing  
22 to?

23 A. Colleagues within The Boeing Company.

24 Q. What does Mr. Forkner write to his Boeing  
25 colleagues about the FSB report? If you could focus on the

1 highlighted text, please.

2 A. Sure. "Attached is the final and approved 737 FSB  
3 report which adds the 737 MAX." He went on to state, "This  
4 formally approves the MAX as the same type rating as the 737  
5 and Level B differences between NG and MAX in the report."

6 Q. Does the defendant say that he's attached the FSB  
7 report?

8 A. Yes.

9 Q. And does this email have an attachment?

10 A. Yes.

11 MR. O'NEILL: If we could please turn to page 5 of  
12 the exhibit, which is the first page of the attached report.  
13 If we could please call out the bottom "approved by"  
14 section, Ms. Holbrook.

15 BY MR. O'NEILL:

16 Q. Special Agent Byers, who approved the FSB report,  
17 as noted here?

18 A. This was approved by the Federal Aviation  
19 Administration, Air Traffic Evaluation Group, or AEG.

20 Q. Have you had a chance to review this before your  
21 testimony today?

22 A. Yes, sir.

23 Q. Based on your review, is MCAS, or the Maneuvering  
24 Characteristics Augmentation System, is that referenced  
25 anywhere in this final FSB report?

1           A.    No, sir.

2                   MR. O'NEILL:  If we could please go back to the  
3 defendant's cover email.

4 BY MR. O'NEILL:

5           Q.    Special Agent, what level of differences training  
6 does the defendant say is reflected in this final and  
7 approved FSB report?

8           A.    Level B.

9                   MR. O'NEILL:  Let's please publish and turn to  
10 government Exhibit 29.

11 BY MR. O'NEILL:

12           Q.    Are you familiar with this email from the  
13 defendant?

14           A.    I am, yes.

15           Q.    Who is the defendant emailing, just generally?

16           A.    Chris Hurrell at American Airlines.

17           Q.    And what is the defendant emailing to American  
18 Airlines?

19           A.    The 737 FSB report updated with the MAX.

20           Q.    With what level of training for the MAX?

21           A.    Level B.

22           Q.    On what date?

23           A.    July 7 of 2017.

24           Q.    Is that the date that the report was published?

25           A.    Yes.

1 MR. O'NEILL: If we could please turn to and  
2 publish government Exhibit 30.

3 BY MR. O'NEILL:

4 Q. Special Agent, are you familiar with this email  
5 from the defendant?

6 A. Yes, sir, I am.

7 Q. Just on a high level, who is the defendant  
8 emailing?

9 A. These gentlemen are with Southwest Airlines.

10 Q. Does this email have an attachment?

11 A. It does, yes.

12 Q. What is the defendant sending to Southwest  
13 Airlines in this email?

14 A. In this email, it's also the 737 FSB report, which  
15 is adding the 737 MAX.

16 Q. With what level of training for the MAX?

17 A. Level B.

18 Q. And on what date does he send this to Southwest  
19 Airlines?

20 A. This is the same day, July 7, 2017.

21 Q. The same date the report was published?

22 A. Yes, sir.

23 MR. O'NEILL: We can take that down Ms. Holbrook,  
24 thank you.

25 ///



1 BY MR. O'NEILL:

2 Q. Special Agent, I believe you testified that the  
3 FAA AEG approved the FSB report we just saw; is that right?

4 A. Yes.

5 Q. Did you review emails from the defendant  
6 discussing how to deal with or interact with the FAA AEG?

7 A. I did.

8 Q. Let's talk about Government Exhibit 11A, as in  
9 "apple," and 11, which are in evidence. And before I  
10 publish them, are you generally familiar with these emails?

11 A. I think so. Yes, sir, I am.

12 Q. Are they two parts of the same email thread?

13 A. Yes. It looks like it's an email thread that has  
14 been branched off in a different direction.

15 Q. Okay. And does the defendant reply at the top of  
16 the thread?

17 A. He does on Government Exhibit 11, yes.

18 MR. O'NEILL: If we could please publish  
19 Government Exhibit 11A, which is the first message in the  
20 chain.

21 BY MR. O'NEILL:

22 Q. Focusing on this first message in the longer  
23 chain, who is this email from?

24 A. Um, this is from Mr. Chamberlain at The Boeing  
25 Company.

1 Q. And who's it to?

2 A. Mr. Forkner and Mr. Gustavsson.

3 Q. What's the subject line of Mr. Chamberlain's  
4 message?

5 A. "AEG Visit Thursday."

6 Q. And do you see here, does Mr. Chamberlain write to  
7 the defendant and Mr. Gustavsson things to talk about?

8 A. Yes, sir.

9 Q. And one of those is, "Respond to Stacey's email  
10 attached." Do you see that in the highlight?

11 A. I do, yes, sir.

12 Q. And later in the message, see highlighted at the  
13 bottom, Mr. Chamberlain writes, "Anything else to talk to  
14 her about?"

15 A. Correct.

16 Q. And does Mr. Chamberlain attach someone named  
17 Stacey's email as he references here?

18 A. Yes, he does.

19 MR. O'NEILL: If we could please turn to page 12  
20 of this exhibit, Ms. Holbrook. And if we could just pull it  
21 up side by side with this cover email from Mr. Chamberlain.

22 BY MR. O'NEILL:

23 Q. Is this the signature block of the email that was  
24 attached to Mr. Chamberlain's message?

25 A. Yes, it was.

1 Q. And looking at the bottom here, who is the Stacey  
2 that's referenced in Mr. Chamberlain's message to the  
3 defendant?

4 A. Stacey Klein.

5 Q. And where does she work, according to her  
6 signature block here?

7 A. She works for the Aircraft Evaluation Group, or  
8 AEG.

9 Q. What is Ms. Klein's role or her group' role with  
10 respect to the FSB?

11 A. She's the chair.

12 Q. Does the email conversation continue?

13 A. Yes, it does.

14 MR. O'NEILL: Okay. Now, let's take a look, if we  
15 could, Ms. Holbrook, at 11, Government Exhibit 11, which is  
16 the top email in the thread, and if we could keep that side  
17 by side here with Ms. Klein's signature block in the  
18 attached message.

19 BY MR. O'NEILL:

20 Q. Special Agent, what did the defendant write to his  
21 colleagues here in the highlighted text?

22 A. "Patrick, remember the three tools to instructing  
23 with her: Fear, sarcasm, and ridicule."

24 Q. Based on this email thread, who does the defendant  
25 appear to be referring to when he writes "her"?

1 A. Stacey Klein.

2 Q. And what tools, to instructing with Ms. Klein, did  
3 the defendant tell his colleagues to remember?

4 A. Fear, sarcasm, and ridicule.

5 MR. O'NEILL: If we could please publish  
6 Government Exhibit 10.

7 BY MR. O'NEILL:

8 Q. Are you familiar with this document?

9 A. Yes, sir.

10 Q. What's the date?

11 A. The date of this document is January 5th of 2016.

12 Q. And who is the defendant talking with in this  
13 communication?

14 A. This is a chat communication with Mr. Chamberlain.

15 Q. Writing with, excuse me.

16 Is this chat communication with Mr. Chamberlain,  
17 is this before the defendant's November 15th, 2016, "shocker  
18 alert" chat with Mr. Gustavsson?

19 A. Yes.

20 MR. O'NEILL: If we could zoom back out to the  
21 highlighted portion of the defendant's conversation with  
22 Mr. Chamberlain, please.

23 BY MR. O'NEILL:

24 Q. Special Agent, could you please read the  
25 back-and-forth here between Mr. Chamberlain and the

1 defendant from 7:57 through 8:00?

2 A. I'm sorry. Can you repeat that, sir?

3 Q. Yes. Can you please read the back and forth here  
4 between Mr. Chamberlain the defendant starting at 7:57 a.m.  
5 in the highlighted portion?

6 A. Certainly. "That leaves Stacey and Thayer as the  
7 ones that have the understanding of the differences between  
8 the NG and MAX." That's from Mr. Chamberlain.

9 And then Mr. Forkner states, "Dogs watching TV."

10 Q. And does the chat continue?

11 A. It does. I'm sorry.

12 Mr. Chamberlain then goes on to state at  
13 7:59 a.m., "I think we make our money at this meeting by  
14 getting them to buy into the training and evaluation plans.  
15 Unfortunate that Roman won't be here. He can corral Stacey  
16 and guide her."

17 And then Mr. Forkner goes on to state at  
18 8:00 a.m., "I think with all the inexperience present, we  
19 should be able to gang up on them and steer it in the  
20 direction that we want."

21 Q. Mr. Chamberlain's messages refer to the name  
22 "Stacey." Do you see that?

23 A. Yes, sir.

24 MR. O'NEILL: Ms. Holbrook, if we could keep this  
25 and pull up 11A side by side with this chat.

1 BY MR. O'NEILL:

2 Q. Special Agent, based on the context of this chat  
3 communication and the email we just saw at Government  
4 Exhibit 11A, who is Mr. Chamberlain referring to, the name  
5 Stacey?

6 A. Stacey Klein.

7 Q. The Chair of the FSB?

8 A. That is correct, yes.

9 Q. And in his 7:58 a.m. communication, how does the  
10 defendant refer to folks, including Ms. Klein?

11 A. As "Dogs watching TV."

12 Q. And when Mr. Chamberlain continues at 7:59 a.m.,  
13 when he writes, "I think we make our money at this meeting  
14 by getting them to buy into the training and evaluation  
15 plans. Unfortunate that Roman won't be here. He can corral  
16 Stacey and guide her," which Stacey does Mr. Chamberlain  
17 appear to be referring to here?

18 A. Stacey Klein, the Chair of the FSB.

19 Q. How does the defendant respond with regard to  
20 Ms. Klein and others?

21 A. "That with the inexperience present, we should be  
22 able to gang up on them and steer it in the direction we  
23 want."

24 MR. O'NEILL: Court's indulgence.

25 Nothing further.

1 MS. MCFARLANE: Thank you, your Honor.

2 CROSS-EXAMINATION

3 BY MS. MCFARLANE:

4 Q. Good afternoon, Agent Byers. How are you?

5 A. Good morning. Okay.

6 Q. Or morning. Sorry. My time is off today.

7 My name is Ashlee McFarlane, and I represent  
8 Mr. Mark Forkner on this case.

9 On direct examination you said that you're a  
10 special agent with DOT OIG, correct, Department of  
11 Transportation?

12 A. Yes, ma'am.

13 Q. And you've been an agent for over 24 years; is  
14 that right?

15 A. Yes.

16 Q. And over 20 years with the Department of  
17 Transportation; is that right?

18 A. Yes, ma'am.

19 Q. And you've been investigating this case for  
20 several years?

21 A. Yes.

22 Q. It's been several years, right?

23 A. Several years, right.

24 Q. You're one of the lead agents on this case; is  
25 that right?

1           A.    I'm not one of the primary agents.  I'm an agent  
2 on the case, yes.

3           Q.    You're an agent on the case, correct?

4           A.    Yes.

5           Q.    And you've been involved over those few years in  
6 this matter reviewing documents; isn't that right?

7           A.    At times, yes.

8           Q.    And, in fact, you talked about how you obtained  
9 documents in this case from Boeing and Southwest Airlines  
10 and American Airlines.  You mentioned that you obtained them  
11 through subpoenas and other requests; isn't in a correct?

12          A.    Yes.

13          Q.    And you've received, and your team has received,  
14 over 57 million pages of documents in this investigation; is  
15 that right?

16          A.    I don't know the number, but I trust that's  
17 accurate.

18          Q.    You trust that's accurate?

19          A.    It's a lot -- a lot of records were obtained.

20          Q.    And that amounts to over 15 million documents in  
21 this matter alone; do you recall that?

22          A.    I'm sure that's probably an accurate number.

23          Q.    And the documents that you went over today that  
24 have been selected by the prosecutors in this matter  
25 amounted to 30 or so documents; is that about right?



1 A. Something along those lines.

2 Q. Out of the 15 million that you received?

3 A. Yeah, we received a lot of exhibits. It was  
4 thorough.

5 Q. Okay. And in your investigating this case and  
6 reviewing the mountain of documents, you learned that Boeing  
7 is a government contractor; isn't that right?

8 MR. O'NEILL: Objection, relevance.

9 THE COURT: Overruled.

10 THE WITNESS: I believe they're a government  
11 contractor. I don't have any first-hand knowledge of that.

12 BY MS. MCFARLANE:

13 Q. You believe they're a government contractor?

14 A. Yes.

15 Q. And, in fact, they not only manufacture commercial  
16 airplanes, they also are a weapons manufacturer; isn't that  
17 correct?

18 MR. O'NEILL: Objection.

19 THE COURT: Overruled. Do you know?

20 THE WITNESS: I don't know firsthand. I assume  
21 so, but I don't have any firsthand knowledge, your Honor.

22 THE COURT: Okay.

23 BY MS. MCFARLANE:

24 Q. So Agent Byers, you did not look into Boeing's  
25 relationship with the government in reviewing this case?

1 A. That wasn't the focus of our investigation.

2 Q. Okay. And you said you assumed they're a weapons  
3 manufacturer, but you're not sure?

4 A. Well, I know they -- I know there was a separate  
5 division Boeing has, but we looked in the records related to  
6 commercial aircraft.

7 Q. And you understand that Boeing is the largest --  
8 one of the largest multinational employers in the world?

9 You do understand that, correct?

10 A. They're a large company, yeah.

11 Q. Okay. And in your working on this case, you know  
12 that Boeing did not -- did not plead guilty in this matter  
13 at all?

14 MR. O'NEILL: Objection. Objection, relevance.

15 MS. MCFARLANE: Your Honor, it's relevant to the  
16 motive of several Boeing witnesses in this case.

17 THE COURT: Okay. I'm going to sustain that to  
18 this witness.

19 MS. MCFARLANE: I'm sorry, your Honor?

20 THE COURT: Is it relevant to the motive of this  
21 witness?

22 MS. MCFARLANE: It's relevant to the motive of  
23 other Boeing witnesses in this case.

24 THE COURT: Okay. Well, I'll sustain it as to  
25 this witness.

1 MR. O'NEILL: Move to strike, your Honor.

2 THE COURT: Ladies and gentlemen of the jury,  
3 remember my instruction to you. If I sustain an objection  
4 that goes unanswered, you are not to consider the question  
5 for any purpose.

6 MR. O'NEILL: Thank you, your Honor.

7 BY MS. MCFARLANE:

8 Q. And Agent Byers, you've already testified that  
9 Boeing is a weapons manufacturer, the largest multinational  
10 employer in the world, and a contractor for the federal  
11 government --

12 MR. O'NEILL: Objection.

13 THE COURT: I will sustain that. He has not  
14 testified to that.

15 BY MS. MCFARLANE:

16 Q. But Mr. Forkner is sitting here in this courtroom  
17 today; isn't that correct?

18 A. Mr. Forkner?

19 Q. Yes.

20 A. Yes, ma'am.

21 Q. And he's the only former Boeing employee sitting  
22 here today; isn't that correct?

23 MR. O'NEILL: Objection, relevance, 403.

24 THE COURT: Sustained.

25 ///

1 BY MS. MCFARLANE:

2 Q. Now, Mark Forkner -- in investigating this matter,  
3 you looked at Mark Forkner's salary as a Boeing employee,  
4 didn't you?

5 A. The investigative team might have. I did not.

6 Q. You did not?

7 A. No, ma'am.

8 Q. Through your investigation, did you learn what his  
9 salary was in this case?

10 MR. O'NEILL: Objection.

11 THE COURT: Overruled.

12 Did you learn of the salary?

13 THE WITNESS: I don't know his exact salary.

14 BY MS. MCFARLANE:

15 Q. You don't know his exact salary?

16 Okay. I'm going to hand you what's been premarked  
17 as Government's Exhibit 24H.

18 Oh, sorry, Defense Exhibit, not Government  
19 Exhibit.

20 Your Honor, may I approach?

21 THE COURT: Yes.

22 MR. O'NEILL: Your Honor, we would object.

23 Outside the scope; hearsay.

24 THE COURT: Outside the scope and hearsay, you  
25 said?

1 MR. O'NEILL: Outside the scope of direct.

2 THE COURT: Outside the scope of direct. Okay.

3 Overruled.

4 BY MS. MCFARLANE:

5 Q. Agent Byers, can you take a look at the document I  
6 just handed you, please.

7 If you look at the bottom right-hand corner, do  
8 you see the notation there on the bottom?

9 A. Yes.

10 Q. What does that mean to you?

11 A. It's a Bates stamp.

12 Q. Is that a Bates stamp that was received from The  
13 Boeing Company?

14 A. Yes, it appears so.

15 Q. And in looking at this document, is this a  
16 document from The Boeing Company?

17 A. Appears to be, yes.

18 Q. And is this a document that the government  
19 obtained in this investigation from The Boeing Company?

20 A. It would have been, yes.

21 Q. Okay.

22 MS. MCFARLANE: Your Honor, defense moves to admit  
23 Defense Exhibit 24H.

24 MR. O'NEILL: Objection, your Honor. May I  
25 approach?

1 THE COURT: Okay.

2 (A sidebar was had.)

3 THE COURT: Overruled. Exhibit 24H, Exhibit 24H  
4 will be admitted.

5 (Defense Exhibit 24H was admitted into evidence.)

6 BY MS. MCFARLANE:

7 Q. Agent Byers, 24H is now in evidence.

8 MS. MCFARLANE: Can we please publish that to the  
9 jury, Mr. Payton. And if we could just highlight the top  
10 box, please.

11 BY MS. MCFARLANE:

12 Q. Agent Byers, at the top of this document, doesn't  
13 it say "Work history for" -- is this the work history for  
14 Mr. Mark Forkner?

15 A. That's what it says in the document.

16 Q. Okay.

17 MS. MCFARLANE: And if we can highlight on the  
18 left column.

19 BY MS. MCFARLANE:

20 Q. What is his pay rate, as of -- the last pay rate  
21 that he received? Can you read that?

22 A. On the left column?

23 Q. Left column under "Highest Major."

24 A. Under that states, "Pay rate: 159,500."

25 Q. Okay.

1 MS. MCFARLANE: And if we can go back out of that,  
2 please, Mr. Payton.

3 BY MS. MCFARLANE:

4 Q. And if you flip through the document you have,  
5 Agent Byers, are there other pay rates throughout the years  
6 that Mr. Forkner received at The Boeing Company?

7 A. On this document?

8 Q. Yes, sir. Do you notice the various rates?

9 A. I'm probably looking in the wrong place.

10 Q. Third from the right column.

11 A. Third from the right column.

12 Q. Third or forth from the right column.

13 A. Total compensation rate. Yes, there's different  
14 rates, looks like.

15 Q. And it corresponds to all the different years  
16 Mr. Forkner worked for The Boeing Company, correct?

17 A. Corresponds to different years, yes.

18 Q. Okay. If we look at the third page, last row,  
19 this is the lowest amount he's received, correct?

20 Let me highlight that row. If you can say, what's  
21 the -- what's the pay rate for that row?

22 A. The one referencing October of 2011 it looks like?

23 Q. That's correct.

24 A. Okay. That -- that is -- that number is 117,500.

25 Q. Okay. So it would seem from this document that

1 his pay ranged, while at The Boeing Company, from 2011  
2 through when he left in 2018, was from \$117,500 through that  
3 first number we read, 159,000; is that correct?

4 A. It appears so, based on the document, yes.

5 Q. Okay. Thank you.

6 MS. MCFARLANE: We can take that down, please.

7 Your Honor, may I approach the witness?

8 BY MS. MCFARLANE:

9 Q. All right. Agent Byers, I've just handed you  
10 another document. And do you recall, in the course of your  
11 investigation, receiving documents from Boeing that were in  
12 their native form?

13 A. I believe we did.

14 Q. So, long Excel spreadsheets would be in sort of  
15 the actual form of the document; isn't that correct?

16 A. I don't know, but during the investigation, I  
17 received a lot of documents.

18 Q. Right.

19 A. I'm sorry. Go ahead.

20 Q. And so if you received documents in native form,  
21 they would not have a Bates number on them; isn't that  
22 correct?

23 A. Most likely not, yes.

24 Q. Okay. But at the top of this document, this is a  
25 Boeing proprietary document; isn't that correct?



1 A. That's what it states, yes.

2 Q. And this is for Mr. Mark Forkner again, correct?

3 A. Yes, his name is on this.

4 Q. And there's information on here regarding various  
5 pay periods, pay rates, and also bonus information; isn't  
6 that correct?

7 A. It appears that there's, yes, pay information on  
8 here.

9 Q. Okay.

10 MS. MCFARLANE: Your Honor, the Government moves  
11 to admit -- sorry. I'm saying "the Government." Defense  
12 moves to admit Defense Exhibit 24G.

13 MR. O'NEILL: No objection.

14 THE COURT: 24G will be admitted.

15 (Defense Exhibit 24G was admitted into evidence.)

16 BY MS. MCFARLANE:

17 Q. Okay. If you can turn to page 10 of this exhibit,  
18 Agent Byers. Are you there?

19 A. I am.

20 MS. MCFARLANE: Okay. If we can pull up this  
21 exhibit, please. All right. If we can highlight line with  
22 the cash award payment for August 12, 2016. On page 10 of  
23 this document. There we go. Can we please highlight that  
24 line? Okay.

25 ///

1 BY MS. MCFARLANE:

2 Q. Agent Byers, for pay period August 12, 2016, how  
3 much was the cash award payment that Mark Forkner received?

4 A. It looks like 2,500.

5 Q. \$2,500. Okay.

6 MS. MCFARLANE: Thank you. We can take that down.

7 BY MS. MCFARLANE:

8 Q. Agent Byers, back to the 57 million pages, 15  
9 million documents, on direct, you talked with the Government  
10 about a chat that Mr. Forkner engaged with Patrik  
11 Gustavsson.

12 A. Yes, ma'am.

13 Q. And you know that Patrik Gustavsson was a friend  
14 of Mr. Forkner's that worked in -- that worked in the same  
15 group as Mr. Forkner; isn't that correct?

16 A. I know they worked together.

17 Q. Okay. And they communicated often; isn't that  
18 correct?

19 A. They did communicate, yes.

20 MS. MCFARLANE: Okay. I want to pull up  
21 Exhibit 22. It's a little blurry on my screen. I don't  
22 know if it's blurry on anyone else's. Can you all see that?

23 BY MS. MCFARLANE:

24 Q. Can you see that, Agent Byers?

25 A. When it's pulled up, I can see it.

1 Q. On direct examination, we only read parts of that  
2 chat, so I would like to read the whole thing, if you don't  
3 mind. This was November 15, 2016. And again, this was a  
4 chat conversation; isn't that correct?

5 A. Yes, ma'am.

6 Q. It was not a formal email chain, correct?

7 A. Correct. It was a chat.

8 Q. Okay. Can you start reading that for us at the  
9 top with Mark Forkner at 6:46 p.m.?

10 A. 6:46 in the call-out box that you've got here; is  
11 that correct?

12 Q. I'm sorry?

13 A. What you want on the screen, is that correct, the  
14 call-out box?

15 Q. Yes.

16 A. So it starts with Mr. Forkner stating, "Dude, log  
17 off."

18 Mr. Gustavsson responds, "You, too. I just logged  
19 on to check my schedule. I have so much to do that I want  
20 to work from home. I can't get stuff done in the office."

21 And then Mr. Forkner responds back, "Naw, I'm  
22 locked in my hotel room with an ice cold Grey Goose, and  
23 I'll probably fire off a few dozen inappropriate emails  
24 before I call it a night."

25 Q. Okay. Stop right there for me.

1           A.    Uh-huh.

2           Q.    What's Grey Goose?

3           A.    I assume he's talking about vodka.

4           Q.    Okay.  Keep going.

5           A.    "LMAO."

6           Q.    Do you understand what "LMAO" stands for?

7           A.    Yes.  As far as the text goes, yes.

8           Q.    It refers to laughing, correct?

9           A.    Yeah.

10          Q.    Okay.  Keep going.

11          A.    Mr. Forkner responds, "This job is insane."

12                Mr. Gustavsson responds, "So did you get anything

13 done in the sim, today, or was it the normal chaos there?"

14          Q.    And you -- I'm sorry to interrupt.  I have to

15 interject a little bit, Agent Byers, but --

16          A.    Sure.

17          Q.    -- on direct you said "sim" referred to the

18 simulator, correct?

19          A.    Yes, ma'am.

20          Q.    And that's not the actual plane; it is a separate

21 sort of box; is that correct?

22          A.    That is correct.

23          Q.    Okay.  Keep going, please.

24          A.    Mr. Forkner responds saying, "Although it must be

25 easy compared to working as a tech pilot for RYR."

1           Mr. Gustavsson responds, "It's different here. We  
2 are pretty busy here for sure."

3           And Mr. Forkner responds, "Actually, this one is  
4 pretty stable. I signed off some DRs, but there are still  
5 some real fundamental issues that they claim they're aware  
6 of."

7           Q.    Pause right there for me, Agent Byers. Based on  
8 your review of this email and other emails that put this one  
9 into context, "This one is pretty stable."

10           What -- what does "one" refer to?

11           A.    I assume they're talking about the -- well, the  
12 simulator.

13           Q.    The simulator. That's your understanding?

14           And then it says, "I signed off on some DRs."  
15 What are "DRs"?

16           A.    I would assume he is referring to discrepancy  
17 reports.

18           Q.    Discrepancy reports.

19           And that's based on your investigation in  
20 reviewing other emails, correct, that you would know that  
21 "DR" is discrepancy reports?

22           A.    Yes, that's my --

23           MR. O'NEILL: I would object to the scope.

24           THE COURT: Overruled.

25           BY MS. MCFARLANE:

1 Q. And it says, "But there are still some real  
2 fundamental issues that they claim they're aware of."

3 Do you know who he's referring to when he says  
4 "they"?

5 A. I don't know.

6 MS. MCFARLANE: Okay. Can we pull up the next  
7 call box, please?

8 BY MS. MCFARLANE:

9 Q. Please proceed, Agent Byers.

10 A. Oh, I'm sorry. "What I hated about Ryanair was  
11 the extreme pressure they put on people. Okay. That's  
12 good."

13 Mr. Forkner responds, "So I just need to start  
14 being a dick to make you quit?"

15 Mr. Gustavsson responds, "LOL, that's it."

16 Mr. Forkner responds, "All right. No more mister  
17 Nice Guy." He went on to state, "Actually, I'd cry  
18 uncontrollably if you left. I would ask for a sales job --  
19 or job in sales where I can just get paid to drink with  
20 customers and lie about how awesome our airplanes are."

21 Mr. Gustavsson responded, "I would cry if anyone  
22 in our group left."

23 Mr. Forkner responded, "Oh, shocker alert. MCAS  
24 is now active down to M .2. It's running rampant in the sim  
25 on me. At least that's what Vince thinks is happening."

1 Q. Okay. Pause right there for me. Mr. Forkner  
2 says, "It's running rampant in the simulator on me." The  
3 "sim."

4 You don't know what "it" -- what "it" means in  
5 this chat, do you?

6 A. Well, he says --

7 Q. "It's running rampant on the sim on me"?

8 A. We talked about MCAS going down. It's running  
9 rampant, no.

10 Q. I'm sorry, I'm not understanding your answer.

11 You do not know what "it" is referring to in this  
12 chat; is that correct?

13 A. Only in the context of what's written above it,  
14 but I don't know what "it" by itself -- I guess, can you  
15 rephrase that or repeat that? I'm sorry.

16 Q. Okay. Is it true that you do not know what  
17 Mr. Forkner is referring to when he says, "It's running  
18 rampant on the sim"?

19 A. "It's"? No.

20 Q. Okay. You do not know what that is? Okay.

21 And then it says, "At least that's what Vince  
22 thinks is happening."

23 Based on your investigation, do you know who he's  
24 referring to when he says "Vince"?

25 A. It's my understanding he's a colleague, but I

1 don't know. I did not --

2 Q. What's -- what's his full name?

3 A. I don't know.

4 Q. You don't know the full name for Vince?

5 A. I don't. Others on the investigative team, I  
6 believe, looked into some of that, but I don't recall his  
7 name.

8 Q. Okay. Have you heard of a Vince Pupo?

9 A. I've heard the name.

10 Q. Okay. Do you know who Vince Pupo is?

11 A. I don't.

12 Q. Okay. Keep going.

13 A. "Oh, great. That means we have to update the  
14 speed trim prescription in Vol 2."

15 Mr. Forkner responded, "So I basically lied to the  
16 regulators unknowingly."

17 Mr. Gustavsson responded, "It wasn't a lie. No one  
18 told us that was the case."

19 Mr. Forkner responded, "I'm leveling at, like,  
20 4,000 feet, 230 knots, and the plane is trimming itself like  
21 crazy."

22 Q. Okay. Next call out, please.

23 A. "I'm like, what?"

24 Mr. Gustavsson responds, "That's what I saw on Sim  
25 1, but on approach, I think that's wrong."



1           Mr. Forkner responded, "Granted, I suck at flying,  
2 but even this was egregious."

3           Mr. Gustavsson goes on to state, "No. I think we  
4 need Aero to confirm what it's supposed to be doing."

5           Q. Okay. Stop right there for me, Agent Byers.

6           A. Yes.

7           Q. Based on your investigation and your  
8 understanding, who is Aero?

9           A. My understanding is that Aero is a group made up  
10 of engineers.

11          Q. At Boeing?

12          A. Yes.

13          Q. Okay. The engineering group at Boeing? Okay.

14                So he says, "I think we need Aero to confirm what  
15 it's supposed to be doing."

16                Again, what do you understand "it's" to be  
17 referring to? Or do you know?

18          A. In the context of this?

19          Q. Yes.

20          A. Are you asking for my opinion?

21          Q. No, I'm not. Your understanding of this, if you  
22 have one. Do you know? It's okay if you don't.

23          A. My understanding would either be MCAS or the  
24 simulator.

25          Q. MCAS or the simulator?

1           A.    Well, MCAS is part of the flight controls for the  
2 simulator, so I'd assume the simulator.

3           Q.    You would assume the simulator?

4           A.    Right.

5           Q.    Do you know if that's what he's referring to?

6           A.    Beyond the context of this, no.

7           Q.    Okay. Please keep going, the next line. "Vince  
8 is going to get me" --

9           MR. O'NEILL: Your Honor, I would object to the  
10 form. Is there a question?

11          MS. MCFARLANE: I'm asking him to proceed reading.

12          THE COURT: Well, you want him just to read this  
13 stuff?

14          MS. MCFARLANE: Yes, your Honor.

15          THE COURT: Okay. Do you have a question about  
16 anything in particular or are you just wanting him to read  
17 all of the --

18          MS. MCFARLANE: I will have a question right after  
19 he reads this next line.

20          THE COURT: Okay.

21          MS. MCFARLANE: And your Honor, just -- I'm sorry.  
22 Did you rule?

23          THE COURT: Go ahead and read the next line.

24          THE WITNESS: Okay. Sorry. Lost my place here on  
25 the screen. Mr. Gustavsson stated, "I don't know" --

1 BY MS. MCFARLANE

2 Q. This is --

3 A. Oh, I already read this line. I'm sorry.

4 THE COURT: Go ahead and read the next line.

5 THE WITNESS: I'm sorry. "Vince is going to get  
6 some spreadsheet table that shows when it's supposed to kick  
7 in. Why are we just now hearing about this?"

8 BY MS. MCFARLANE:

9 Q. Okay. Mr. Forkner says, "Vince is going to get me  
10 some spreadsheet tables," and you mentioned that -- we've  
11 talked about the 15 million documents that have been  
12 received in this case.

13 Isn't it true that there was never a spreadsheet  
14 table provided by Mr. Vince?

15 A. I don't know.

16 Q. You don't know?

17 Okay. Have you ever seen a spreadsheet table  
18 provided by Mr. Vince?

19 A. I have not.

20 Q. Okay.

21 MS. MCFARLANE: Your Honor, I would like for him  
22 to continue reading this. For the rule of completeness, I  
23 believe that the government --

24 THE COURT: Well, is this not in evidence?

25 MS. MCFARLANE: It is, your Honor.

1 THE COURT: Okay. Well, the jury will have it.

2 MS. MCFARLANE: Okay. May we proceed, just the  
3 last few lines?

4 THE COURT: Say that again?

5 MS. MCFARLANE: Your Honor, may we proceed reading  
6 the final few entries?

7 THE COURT: Well, it's in evidence. So do you  
8 have a question about any of the specific lines?

9 Just direct him to the lines you want to ask him  
10 about.

11 MS. MCFARLANE: Just the very next line, your  
12 Honor.

13 THE COURT: Go ahead.

14 THE WITNESS: The next line, Mr. Gustavsson  
15 responds, stating, I don't know. The test pilots have kept  
16 us out of the loop. It's really only Christine that is  
17 trying to work with us, but she is busy -- been too busy.

18 BY MS. MCFARLANE:

19 Q. Thank you, Agent Byers.

20 When Mr. Gustavsson says, "I don't know. The test  
21 pilots have kept us out of the loop," who is he referring to  
22 when he says "the test pilots"?

23 A. Test pilots would be people within Boeing.

24 Q. And is it your understanding that FAA also has  
25 test pilots?

1 A. They do.

2 Q. Okay. And when he says, "Christine" -- "It's  
3 really only Christine that is trying to work with us," do  
4 you know who he's referring to when he says "Christine"?

5 A. In the context of this chat or with this work  
6 group?

7 Q. If you have any knowledge on who he would be  
8 referring to when he says "Christine." Is that Christine  
9 Walsh?

10 A. That would be my --

11 Q. Okay.

12 A. Who I believe he would be referring to, yes.

13 MS. MCFARLANE: Okay. We can take this down.

14 BY MS. MCFARLANE:

15 Q. In the course of your investigation, Agent Byers,  
16 you've also reviewed phone records, Boeing phone records,  
17 other phone records of pertinent individuals in this case;  
18 isn't that correct?

19 A. The investigative team has, yes.

20 Q. Have you?

21 A. I don't believe I've gone through phone records,  
22 no.

23 Q. But you have knowledge that others on the  
24 investigative team have, correct?

25 A. Yes.

1 Q. And you are familiar with a Mr. David Loffing;  
2 isn't that correct?

3 A. I know who he is.

4 Q. And who is he?

5 A. He works for Boeing.

6 Q. He's a Boeing employee? Do you know his position  
7 at Boeing?

8 A. I do not.

9 Q. Okay. And do you -- are you aware of any records,  
10 phone records of calls, between Mr. David Loffing and  
11 Mr. Mark Forkner?

12 A. I am not.

13 Q. You are not. Okay.

14 Do you know if any of those records exist?

15 A. I don't know.

16 Q. Okay. I want to pull up what I believe has  
17 already been admitted. I want to make sure. Yes.

18 Do you have your government exhibit binder --

19 A. I do.

20 Q. -- there?

21 A. Yes.

22 Q. And you've looked at Government Exhibit 13 and  
23 Government Exhibit 26; is that correct?

24 A. Yes.

25 Q. Okay.

1 MS. MCFARLANE: Can we pull up Government Exhibit  
2 13, please?

3 BY MS. MCFARLANE:

4 Q. You went over this email on direct. I'm not sure  
5 we read this on direct. Do you recall this email?

6 A. I'm familiar with this email, yes.

7 Q. Okay. And it's an email from Mark Forkner to  
8 Stacey Klein at the FAA, correct?

9 A. Correct. And Aaron Perkins at the FAA, yes.

10 Q. And it talks about the fact that MCAS -- it  
11 confirmed with flight control engineers that MCAS does live  
12 in both FCCs.

13 And what had does "FCC" refer to?

14 A. Flight control computers.

15 Q. Flight control computers.

16 "And only needs one to function." Okay. He goes  
17 on to say, "Are you okay with us removing all reference to  
18 MCAS from the FCOM?"

19 This is the first communication from Mark Forkner  
20 to Stacey Klein about MCAS; isn't that correct?

21 A. I'm not sure if there's more --

22 Q. Written communication.

23 A. Written communication, I believe this is one of  
24 the earlier ones.

25 Q. Right.

1 A. I'm not sure if it's the first.

2 Q. I'm sorry. I didn't hear you.

3 A. I don't know if it's the first, but -- but it is  
4 an earlier communication.

5 Q. Have you seen an earlier written communication  
6 from Mr. Forkner to Stacey Klein about MCAS?

7 A. I don't recall one.

8 Q. You don't recall one. Okay.

9 A. No.

10 Q. Okay. And this is March 30, 2016; is that  
11 correct?

12 A. Yes, it is.

13 Q. All right. And then Government Exhibit 26, I  
14 believe, has also already been admitted.

15 This is another communication from Mr. Forkner to  
16 Ms. Klein at the FAA about MCAS; isn't that correct?

17 A. It is, yes.

18 Q. And he's reminding her that they weren't going to  
19 cover it in the FCOM, and it's way outside the normal  
20 operating envelope; isn't that correct?

21 MR. O'NEILL: Objection to the characterization of  
22 evidence.

23 THE COURT: Overruled.

24 If you can answer the question, you can. If it  
25 doesn't say what -- if it doesn't say what she says it is,



1 go ahead and say what it says.

2 THE WITNESS: Okay.

3 BY MS. MCFARLANE:

4 Q. I can rephrase.

5 It says recall, "We decided we weren't going to  
6 cover it in the FCOM or the CBT." Doesn't it say that?

7 A. It states, "Under Flight Control Section, Delete  
8 MCAS recall. We didn't" -- "we decided we weren't going to  
9 cover it in the FCOM or the CBT since it's way outside of  
10 the normal operating envelope," yes.

11 Q. And this is another communication from Mark  
12 Forkner to Stacey Klein about MCAS; isn't that correct?

13 A. Yes. This was dated January 17 of 2017.

14 Q. So that's two.

15 And Government Exhibit 24 --

16 That's two communications from Mr. Forkner to  
17 Ms. Klein regarding MCAS. Do you know if there are many  
18 more?

19 A. I don't know the exact number, if there were any  
20 more.

21 Q. Okay. Would it ring true to you that there are  
22 only three written communications from Mr. Forkner to  
23 Ms. Klein about MCAS?

24 A. I trust that's accurate.

25 Q. And that is out of 15 million documents that the

1 government has recovered, we have three written  
2 communications from Mr. Forkner to Ms. Klein about MCAS.  
3 That's correct?

4 A. Okay.

5 Q. Okay. And in those emails that we've just  
6 reviewed, there is no mention from Mr. Forkner to Ms. Klein  
7 about wind-up turns, correct?

8 A. In those communications, no.

9 Q. Right. That MCAS only functions within wind-up  
10 turns. That's not said there; isn't that correct?

11 A. No. Wind-up turns was not said.

12 Q. Okay. And it does not even mention speed; that it  
13 only operates in high speeds, for instance, does it?

14 A. Not in those communications.

15 Q. Okay. But both of those communications, they both  
16 talk about it operating outside the normal operating  
17 envelope; isn't that correct?

18 A. Yes.

19 Q. And what is your understanding of the normal  
20 operating envelope?

21 MR. O'NEILL: Objection. Objection, foundation.

22 THE COURT: Okay. What do you say to that?

23 MS. MCFARLANE: If he has an understanding, your  
24 Honor.

25 MR. O'NEILL: Your Honor, if I may? This is

1 summary witness testimony that the government has narrowed  
2 and not undertaken in its direct.

3 THE COURT: Okay. Do you know what that means,  
4 "operating out of the normal operating envelope"? Do you  
5 know what that means?

6 THE WITNESS: I would only have to speculate on  
7 that, your Honor. I'm not a pilot.

8 THE COURT: Okay. All right. I will sustain the  
9 objection because he would have to speculate.

10 BY MS. MCFARLANE:

11 Q. Agent Byers, but you would -- you would admit that  
12 that is the phrase that was used in both of those emails  
13 from Mr. Forkner?

14 A. "The normal operating envelope"?

15 Q. Correct.

16 A. Yes.

17 Q. Okay.

18 MS. MCFARLANE: Your Honor, may I approach?

19 BY MS. MCFARLANE:

20 Q. Agent Byers, do you recognize this document?

21 A. I'm not familiar with this one, no.

22 Q. If you look at the bottom right-hand corner, are  
23 you familiar with that Bates number?

24 A. Yes, there's also a Bates number in there.

25 Q. And does "DOJ PROD" mean the Department of Justice

1 produced this document?

2 A. Yes.

3 Q. And at the top of the document, does it refer to  
4 it being Boeing's document?

5 A. Yes.

6 Q. And is this one of the documents that the  
7 government received as part of your investigation?

8 A. I would assume so, based on that, yes.

9 MS. MCFARLANE: Your Honor, the defense moves to  
10 admit Defendant's Exhibit 7.

11 THE COURT: He said he's not familiar with Defense  
12 Exhibit 7.

13 MS. MCFARLANE: This is a business record from  
14 Boeing that the government received, your Honor.

15 THE COURT: Okay. So you're saying that it's  
16 authenticated, and it's a business record, so I will admit  
17 the exhibit.

18 MS. MCFARLANE: Yes, your Honor.

19 THE COURT: So I will admit the exhibit. He's  
20 saying he's never seen the exhibit, though. So go ahead.  
21 The exhibit is admitted.

22 (Defense Exhibit 7 was admitted into evidence.)

23 MS. MCFARLANE: Thank you, your Honor.

24 If we can now publish this to the jury, your  
25 Honor.

1                   Mr. Payton, if you can pull up Defendant's  
2 Exhibit 7?

3 BY MS. MCFARLANE:

4           Q.    This says at the top that it is -- this is a  
5 Coordination Sheet, isn't that right, Agent Byers?

6           A.    That's what it states, yes.

7           Q.    And Coordination Sheet, I'm sure in your  
8 investigation you've learned that "COORD Sheet" refers to  
9 Coordination Sheet?

10           MR. O'NEILL:  Objection.

11 BY MS. MCFARLANE:

12           Q.    Is that true?

13           THE COURT:  Do you know the answer to that?

14           THE WITNESS:  As far as this document goes, I'm  
15 not familiar with it.  Coordination?

16           THE COURT:  Do you know what -- but do you know  
17 what "COORD Sheet" means?

18           THE WITNESS:  I -- I have no basis on that, no.

19 BY MS. MCFARLANE:

20           Q.    You don't know what "COORD Sheet" refers to?

21           A.    No.

22           Q.    Okay.  No problem.

23                   This is a Coordination Sheet.

24           MS. MCFARLANE:  If you can take that down, please.

25           ///

1 BY MS. MCFARLANE:

2 Q. And at the top, there's TOs and CCs. Do you see  
3 that? The names there?

4 A. I do, yes.

5 Q. Do you see Mark Forkner's name listed there at  
6 all?

7 A. I don't on this, no.

8 Q. And what's the date of this document?

9 A. Looks like March 30th of 2016.

10 Q. Okay.

11 MS. MCFARLANE: You can take that down.

12 If we can highlight that bold paragraph there, I  
13 have a question for you about this, Flight Test Results.

14 BY MS. MCFARLANE:

15 Q. And I understand, Agent Byers, you don't know what  
16 a COORD Sheet is, so I'm not going to ask you about that.

17 THE COURT: Well, but he's not even seen this  
18 document. So why are you asking him questions about a  
19 document he has not seen?

20 MS. MCFARLANE: Your Honor, I would like to ask  
21 him about a subject matter that he's familiar with.

22 THE COURT: You can ask him about a subject  
23 matter, but I don't understand why you're showing him this  
24 document that he's never seen and directing him to portions  
25 of the document.

1 MS. MCFARLANE: I can ask the question without  
2 referring to the document, your Honor.

3 THE COURT: Go ahead.

4 MS. MCFARLANE: We can take that down, Mr. Payton.

5 MR. O'NEILL: And your Honor, we would object to  
6 the summary -- to eliciting of summary testimony that has  
7 been the subject of a ruling of this case.

8 THE COURT: You will have to say that one more  
9 time. I didn't hear you. Speak up good and loud.

10 MR. O'NEILL: We object, your Honor, to the  
11 questions that would essentially elicit what's close to  
12 summary testimony in light of prior rulings in this case.

13 THE COURT: Okay. I'm not sure what you mean by  
14 "prior rulings of the case." I know the subjects that I've  
15 ruled on. So object if this gets into one of those  
16 subjects.

17 MR. O'NEILL: Yes, your Honor.

18 BY MS. MCFARLANE:

19 Q. In the course of your investigation, Agent Byers,  
20 are you aware that MCAS, the system, was changed at some  
21 point?

22 A. Yes, at some point.

23 Q. Okay. Do you know when?

24 A. I don't know.

25 Q. Okay. And do you know how it was changed?

1           A.    I understand from a high level how it was changed,  
2    yes.

3           Q.    Can you explain that?

4           A.    So it's the --

5           MR. O'NEILL:  Objection.  Hearsay.

6           THE COURT:  Okay.  What's your response to that?

7           MS. MCFARLANE:  He's speaking of his understanding  
8    and how do you understand -- I can lay the foundation, your  
9    Honor, if necessary.

10          MR. O'NEILL:  Your Honor, may we approach?

11          THE COURT:  No.  That objection is sustained.

12          MS. MCFARLANE:  Okay.

13    BY MS. MCFARLANE:

14          Q.    You mentioned you understood.  How do you  
15    understand, Mr. -- before saying what your understanding is?

16          MR. O'NEILL:  Objection, calls for hearsay.

17          THE COURT:  Well, he -- you can answer how it is  
18    you've come to understand this.

19          THE WITNESS:  Just through the course of the  
20    investigation from others.

21          THE COURT:  From other people in the  
22    investigation?  Is that what you're saying?

23          THE WITNESS:  I'm sorry.  You have to repeat the  
24    question here.  As far as the basis of my understanding?  As  
25    far as -- can you repeat the question?  I'm getting lost



1 here. I'm sorry.

2 MS. MCFARLANE: No problem. I will repeat.

3 BY MS. MCFARLANE:

4 Q. I asked you if you understood that MCAS had  
5 changed at some point. You said yes.

6 And my question is, what is the basis -- how do  
7 you know that? What's the basis of that understanding,  
8 without saying what that understanding is?

9 THE COURT: How did you learn that it changed?

10 THE WITNESS: From others, other people that have  
11 conveyed information through the course of the  
12 investigation.

13 THE COURT: Okay.

14 THE WITNESS: There's a specific document --

15 THE COURT: Hold on.

16 THE WITNESS: I'm sorry.

17 THE COURT: Wait for the next question.

18 THE WITNESS: Okay.

19 BY MS. MCFARLANE:

20 Q. When you say you learned from others --

21 A. Yes.

22 Q. -- within this investigation, who are you -- who  
23 are you talking about?

24 A. Other -- well, a variety of things. So it's an  
25 investigative team, so there's other people on the team and

1 then there's individuals that we've interviewed along the  
2 way. Although I've interviewed some people, I have not  
3 interviewed, by any means, most, or all of the people. So  
4 information would be passed along just in the course of the  
5 investigation. So that's kind of my general understanding.  
6 I couldn't pinpoint a particular individual or time  
7 regarding that.

8 MS. MCFARLANE: Your Honor, I don't want to go  
9 into this --

10 THE COURT: It sounds like it would be hearsay at  
11 this point.

12 MS. MCFARLANE: Okay. I can move on from that,  
13 your Honor.

14 Can I also see Defense Exhibit No. 9, please.  
15 May I approach, your Honor?

16 THE WITNESS: Thank you.

17 BY MS. MCFARLANE:

18 Q. Agent Byers, I've just handed you what's been  
19 premarked as Defendant's Exhibit No. 9. If you can look at  
20 the bottom right-hand corner, do you recognize those Bates  
21 numbers?

22 A. Yes.

23 Q. And does "DOJ PROD" mean that the government  
24 received -- or produced this document to us; is that  
25 correct?

1 A. Correct, yes.

2 Q. And do you recognize this to be emails between  
3 Boeing employees; is that correct?

4 A. That's correct.

5 Q. And attachment?

6 A. That's what it appears, yes.

7 Q. And this was document -- this was a document that  
8 the government received from the Boeing Company; is that  
9 correct?

10 A. Correct.

11 MS. MCFARLANE: Your Honor, the defense would move  
12 to admit Defense Exhibit No. 9.

13 MR. O'NEILL: Objection, relevancy and hearsay.

14 MS. MCFARLANE: This is an official business  
15 record, your Honor.

16 THE COURT: So you have business record affidavit?

17 MS. MCFARLANE: Yes, your Honor.

18 THE COURT: All right. And then he says -- so how  
19 is it relevant?

20 MS. MCFARLANE: Your Honor, this is the CSID  
21 document that discusses the MCAS that was never updated.

22 MR. O'NEILL: Your Honor, it does not appear that  
23 Mr. Forkner is on these documents. I would object to its  
24 relevance.

25 MS. MCFARLANE: Again, it's a --

1 THE COURT: Overruled.

2 Exhibit 9 will be admitted.

3 MS. MCFARLANE: Thank you, your Honor.

4 (Defense Exhibit 9 was admitted into evidence.)

5 BY MS. MCFARLANE:

6 Q. Okay. If we can turn to page 3 of this document,  
7 Agent Byers, the title of this document is "Crew Systems  
8 Interface Document."

9 Have you seen this document before?

10 A. I'm not familiar with this document.

11 Q. Have you ever seen a Crew Systems Interface  
12 Document, just generally?

13 A. I'm not overly familiar with it. I couldn't  
14 recall seeing something like this before.

15 Q. Okay. And are you familiar with the term "CSID"  
16 at all?

17 A. No.

18 Q. Okay. Thank you.

19 MS. MCFARLANE: We can take that down.

20 May I approach, your Honor?

21 THE WITNESS: Thank you.

22 BY MS. MCFARLANE:

23 Q. I've just handed you, Agent Byers, what has been  
24 premarked as Defense Exhibit 89 and 246. Do you see that?

25 A. I do, yes.

1 Q. And if you look at both of those documents, they  
2 both have DOJ PROD Bates numbers, which means that they've  
3 been produced to us by the government; is that correct?

4 A. Yes, ma'am.

5 Q. And these are, again, both Boeing documents that  
6 the government received; isn't that correct?

7 A. It appears so, yes.

8 MS. MCFARLANE: Okay. Your Honor, the defense  
9 moves to admit Defendant's Exhibit 89 and 246 as official  
10 business records.

11 MR. O'NEILL: Your Honor, no objection to 89, but  
12 the government objects to Defense Exhibit 246, outside the  
13 scope of the scheme charged, and the defendant is not on the  
14 document. So we object to relevance.

15 MS. MCFARLANE: Again, your Honor, this is  
16 relevant to the official Boeing records that have either --  
17 that have not updated the description of MCAS.

18 THE COURT: Okay. That will be overruled. Those  
19 two will be admitted.

20 (Defense Exhibits 89 and 246 were admitted into  
21 evidence.)

22 BY MS. MCFARLANE:

23 Q. Now, if we look at Exhibit 89 -- this will be  
24 fast -- I believe you already testified that you do not  
25 recognize the Crew Systems Interface Document; is that

1 correct?

2 A. That is correct.

3 Q. Okay. And both of these documents are Crew  
4 Systems Interface Documents, or CSIDs, correct?

5 A. That's what it appears, yes.

6 Q. Okay. So we won't ask you about those. You can  
7 take that down.

8 I would like to go to -- I have some questions  
9 about some of the documents that the government discussed  
10 with you on direct examination.

11 If you turn to Government Exhibit 4, please, in  
12 your binder. Do you have that document in front of you?

13 A. Yes, ma'am, I do.

14 Q. You testified to this document. Do you know --

15 MS. MCFARLANE: Can we pull that up, please,  
16 Government Exhibit 4 and highlight from the top through the  
17 content of the email, please.

18 BY MS. MCFARLANE:

19 Q. Do you know who Katie Younkin is, Agent Byers?

20 A. I believe she's somebody within The Boeing  
21 Company.

22 Q. I'm sorry. I can't hear you.

23 A. I believe she's somebody within The Boeing  
24 Company.

25 Q. Do you what department she's in?

1 A. I do not.

2 Q. Okay. And the government highlighted the first  
3 sentence. "One of the prime program directives is that the  
4 NG to MAX differences training level cannot exceed Level B."  
5 Do you see that?

6 A. I do, yes.

7 Q. What is your understanding of what "program"  
8 refers to?

9 A. I don't know.

10 Q. You don't know? Okay.

11 And it talks about a financial penalty. And you  
12 said "SWA" refers to Southwest Airlines --

13 A. Yes, ma'am.

14 Q. -- right?

15 Have you reviewed those contracts with Southwest  
16 Airlines?

17 A. I've seen some of Southwest's documents reflected.  
18 The sales contract, yes.

19 Q. But you don't understand the contract language  
20 within those documents, correct?

21 A. I understand some of the contract language  
22 associated with them, yes.

23 Q. Are you an attorney?

24 A. No.

25 Q. Okay. Do you know any of the legal contract

1 language and what that means within those contracts?

2 A. How so? Sorry.

3 Q. You said you understand some of the language.

4 A. Right.

5 Q. Okay. Did you review specifically the provision  
6 that's mentioned here about a financial penalty?

7 A. The investigative team did, yes.

8 Q. Did you? I'm sorry.

9 A. Did I?

10 Q. Yes.

11 A. Not the direct reference.

12 Q. So that's "no"?

13 A. No.

14 Q. Okay. So you don't have an understanding about  
15 what that specifically means?

16 A. Oh, I have an understanding, yes, based on what we  
17 learned through the investigation.

18 Q. Based on what you've learned in the investigation?

19 A. Yes, ma'am.

20 Q. And I'll ask you the same question I asked  
21 earlier: How did you learn that?

22 A. Through another agent that specifically reviewed  
23 that contract.

24 Q. Through another agent that reviewed the contract?

25 A. Yes.



1 Q. Okay. So -- but you don't know yourself?

2 A. Not directly.

3 Q. Okay.

4 MS. MCFARLANE: Let's go to No. 8, please.

5 BY MS. MCFARLANE:

6 Q. The government reviewed with you the top of this  
7 email on direct examination. Do you recall that?

8 A. Yes.

9 Q. And it talks about -- that last line says, "We  
10 must obtain Level B for RCAS."

11 A. Yes.

12 Q. RCAS is not MCAS, correct?

13 A. Correct.

14 Q. And you're not familiar with what RCAS is, are  
15 you?

16 A. I believe it's another system, but I'm not  
17 familiar with the details of it, no.

18 Q. You're not familiar?

19 A. No.

20 Q. Okay. And it says, "It's a planet killer." He  
21 says, "It's a planet killer."

22 Is that your understanding that's hyperbole in  
23 this email?

24 A. Yes.

25 Q. It's not really a planet killer, right?

1           A.    Well, I don't know the context in which he was  
2 writing it, but I can only assume the context by which I  
3 would be reviewing it as; it is not actually a planet  
4 killer.

5           Q.    It's not actually a planet killer?

6           A.    Rather, a reference to most likely something else,  
7 a movie.

8           Q.    Okay. Referencing a movie?

9           A.    Correct.

10          Q.    And in your reviewing emails from Mr. Forkner, he  
11 does that a lot, isn't that right, reference movies?

12          A.    At times.

13          Q.    Uh-huh.

14                MS. MCFARLANE: Okay. If we can go to No. 12,  
15 please.

16 BY MS. MCFARLANE:

17          Q.    This is an email from Mr. Forkner dated March 8,  
18 2016, about flight controls. Do you recall going over this  
19 email with the government?

20          A.    Yes.

21          Q.    And he says here, "The flight controls module was  
22 updated with a thorough review of the flight control  
23 engineers."

24                And Mark Forkner is not a flight control engineer,  
25 correct?

1 A. Correct.

2 Q. He's not an engineer at all?

3 A. Not that I am aware.

4 Q. And "flight controls module," do you know what  
5 that refers to? "Module"?

6 A. Only within the context of the email. I'm not  
7 sure I could unpack it much further for you than that. As  
8 far as -- do I know -- I'm aware -- I have a general  
9 awareness of what it is.

10 Q. I'm only asking in the context of this email. Do  
11 you refer -- do you know what "flight controls module"  
12 refers to?

13 A. In the context of this email, yes.

14 Q. And what is that?

15 A. Well, it's system on the aircraft.

16 Q. The module is the system on the aircraft?

17 A. I'm sorry?

18 Q. "Module"?

19 A. Yes.

20 Q. Is that the system on the aircraft --

21 A. No, it's a part of aircraft.

22 Q. -- or is that the training program?

23 A. As far as the details of that, I couldn't tell  
24 you.

25 Q. So you don't know what "module" is?

1           A.    Only with respect to the changes that were  
2   referenced in the email.

3           Q.    I'm sorry, Agent Byers. I just want to know if  
4   you know what "module" is when he refers to a "flight  
5   controls module." It's okay to say you don't know, if  
6   that's the truth.

7           A.    Only with respect the attachment that he sent. I  
8   mean, I'm not an engineer myself, so from that standpoint, I  
9   don't know.

10          Q.    Are you saying that "module" refers to the  
11   attachment?

12          A.    No. What I'm saying is the reference to the  
13   module that's in the attachment, the description provided is  
14   all I can tell you about as far as -- I don't know in great  
15   detail what a flight control module is other than it's  
16   associated with an aircraft.

17          Q.    Okay. So you don't know what a flight control  
18   module is?

19                   THE COURT: He's answered the question.

20                   MS. MCFARLANE: Okay. I just want to be clear.

21   BY MS. MCFARLANE:

22          Q.    Within this document, I want to refer to -- you  
23   went over with the government the reference to MCAS, page 7  
24   of 13.

25                   MS. MCFARLANE: Can we go to page 7 of that,

1 please. If we can highlight the very bottom, just the  
2 bottom part. I only have a question about.

3 BY MS. MCFARLANE:

4 Q. Okay. Do you see on page 7 of 13 at the bottom  
5 "Read" column there, Agent Byers? Can you read that?

6 A. Sure. The portion you've highlighted states,  
7 "Maneuvering Characteristic Augmentation System, MCAS. MCAS  
8 duplicates NG approach to stall."

9 Q. And if we can go to the next page, it just  
10 continues on there, that small box, top of the next page.

11 A. Okay. "Fuel forces at cruise Mach numbers by  
12 automatically commanding nose-down stabilizer trim in  
13 certain high angle of attack and high airspeed conditions.  
14 This functionality only functions well outside the normal  
15 operating envelope."

16 Q. That phrase "well outside the normal operating  
17 envelope," it's familiar; isn't that correct?

18 A. Yes.

19 Q. And isn't that the very same phrase that Mark  
20 Forkner used in emailing Stacey Klein at the FAA?

21 A. It is, yes.

22 Q. And this is a document that was updated with a  
23 thorough review by the flight control engineers, correct?

24 A. Yes.

25 Q. Okay.

1 THE COURT: Okay. Why don't we go ahead and take  
2 our morning break. Why don't we take about a 10-minute  
3 break, then we'll get you back down here and keep going  
4 through the case.

5 (A recess was had.)

6 (The jury was brought into court.)

7 THE COURT: Okay. Please be seated.

8 MS. MCFARLANE: Thank you, your Honor.

9 Let's go to the Government's Exhibit 10, please.

10 BY MS. MCFARLANE:

11 Q. Do you recall, Agent Byers, you went over this  
12 document with the government on Direct, and this is Mark  
13 Forkner's chat with colleague, Ross Chamberlain, at Boeing?

14 A. Yes, ma'am.

15 Q. And at the top of the chat, they start off by  
16 saying "Yo" to each other, so this is a pretty informal chat  
17 with colleagues at Boeing, correct?

18 A. It appears to be, yes.

19 Q. And if we go down, Ross Chamberlain at 7:59 a.m --  
20 if we could highlight that.

21 It says, "Funny, I was going to say the same. I  
22 think we make our money at this meeting by getting them to  
23 buy into the training and evaluation plans. It's  
24 unfortunate that Roman won't be here. He can corral Stacey  
25 and guide her."

1                   You said on the record "Stacey" refers to Stacey  
2 Klein.

3           A.    That's correct.

4           Q.    And Roman is also sort of the counterpart to  
5 Stacey. He's at the FAA with Canada, Transport Canada;  
6 isn't that right?

7           A.    I don't know.

8           Q.    And when they -- Ross refers to Roman corralling  
9 Stacey, that's his -- her counterpart at Transport Canada,  
10 the Canadian FAA?

11           MR. O'NEILL:  Objection.  Asked and answered.

12           THE COURT:  Well, he said he didn't know who Roman  
13 was, so sustained.

14           MS. MCFARLANE:  I'll move on.

15 BY MS. MCFARLANE:

16           Q.    If we go to Government's Exhibit 14.

17                   And, again, this is an email that you read just a  
18 line from on direct.  And so I would like to give a little  
19 bit more context here.

20                   Can you read the top line of this email that Mark  
21 Forkner sent May 20th, 2016, and he sent it to Steven and  
22 Casey.  Those are sales and marketing people at Boeing.  Can  
23 you start reading?

24           A.    Sure.  "The training is actually at two hours  
25 right now and probably won't go past three by the time we're

1 done. There really isn't too much to train. It's an NG  
2 with bigger displays, a few new alerts that we were required  
3 to put on the jet by the regulators. There is no backup  
4 plan if we don't get Level B. We're going to get Level B.  
5 The program won't allow anything but that to happen."

6 Q. And sorry. Stop there.

7 And when Mark Forkner says, "the Program," he's  
8 referring to the MAX program; isn't that right?

9 A. I'm not sure what program he's referring to.

10 Q. You've seen that term, "the Program" often through  
11 his emails.

12 A. Right. I would assume it's the MAX program.

13 Q. The MAX program. Okay. Keep going.

14 A. "RCAS was Level B, as determined by the AEG a few  
15 weeks ago. We're beginning to distribute the 30-minute CBT  
16 to customers on request now. The pitch I send you is what  
17 we're giving all MAX customers. We won't be breaking it  
18 down into timing for each subsystem."

19 Q. And, again, RCAS is not MCAS. That's a separate  
20 system; isn't that right?

21 A. Right.

22 Q. And he says that Level B was determined by the AEG  
23 related to RCAS; isn't that right?

24 A. Correct. He states that in his email.

25 Q. All right. If you would go to Government's



1 Exhibit 16, please. You read this -- part of this email on  
2 direct. Again, this is Mark Forkner emailing lots of people  
3 at Boeing after the AEG gave provisional Level B approval;  
4 isn't that right?

5 A. That's correct, yes.

6 Q. And if we look to the second page, the second  
7 paragraph, can you read starting there with "This is  
8 provisional approval."

9 A. Sure. "This is provisional approval pending the  
10 final Part 25 type certification and assuming no significant  
11 systems change to the airplane. The FAA will be sending us  
12 a provisional approval letter within the next two weeks  
13 documenting the Joint Flight Operations Evaluation Board  
14 acceptance of this finding. FAA, Transport Canada, and EASA  
15 are now considered to have accepted this Level B  
16 determination."

17 Q. And FAA Transport Canada and EASA are also  
18 counterparts for different countries; isn't that right?

19 A. That's my understanding, yes.

20 Q. So FAA is for America, correct?

21 A. For the United States, yes.

22 Q. Okay. Keep going, please.

23 A. "This culminates more than three years of tireless  
24 and collaborative efforts across many business units.  
25 Flight Technical, Flight Technical Data, training,

1 development, Flight Deck Crew Ops, all MAX engineer teams,  
2 Flight Test Engineering and, of course, Ed Wilson's  
3 Engineering Test Pilot team, all should be commended for  
4 their efforts in getting us to the finish line.

5 "CAS communications and 737 program communications  
6 are jointly crafting a BNN article to be released on receipt  
7 of the FAA's provisional approval letter."

8 Q. Okay. Thank you. If we can go to this -- the  
9 first page of this. As you said on direct, Keith Leverkusen  
10 responded, "Fantastic news, Mark."

11 And Keith Leverkusen is sort of the big boss at  
12 Boeing -- one of the big bosses at Boeing; is that correct?

13 A. I understand he's executive level.

14 Q. He's executive level at Boeing?

15 A. That's my understanding.

16 Q. And he says, "Fantastic news, Mark. Just a huge  
17 win for the team, for Boeing, and for our customers. We can  
18 now eliminate the longest-standing risk on the 737 MAX  
19 program."

20 Again, there's that word "program." So the MAX --  
21 "the program" refers to the MAX program, as we said before.

22 And then Mark replies, "The program is very happy.  
23 See below." Do you see that?

24 A. Yes, I do.

25 Q. And in your investigation of this case, you

1 understand that the program set the expectation for the MAX  
2 to be at Level B; isn't that correct?

3 A. I'm not sure who set the expectation as Level B.

4 Q. Meaning, Boeing set the expectation for the MAX to  
5 be at Level B before Mark even came, is that correct, based  
6 on your investigation?

7 A. I don't know when that goal was established.

8 Q. But you know it was established above Mark  
9 Forkner?

10 A. I'm sorry?

11 Q. You know that that goal was established above Mark  
12 Forkner within Boeing?

13 A. With -- based on the emails, that's correct.

14 Q. That's correct. Okay.

15 MS. MCFARLANE: If we can go to Government  
16 Exhibit 17, please.

17 BY MS. MCFARLANE:

18 Q. You talked about this email with the government  
19 related to Mark Forkner reaching out to discuss the 787  
20 chief technical pilot position. Do you recall that?

21 A. Yes.

22 Q. And at this time, Mark Forkner was the chief tech  
23 pilot for the 737 MAX, correct?

24 A. For the MAX, yes.

25 Q. And the 787 is just a different type of air -- a

1 different type of the plane, correct?

2 A. It's a different model of aircraft.

3 Q. A different model. But it's the same position,  
4 chief tech pilot; isn't that correct?

5 A. Of a different aircraft, yes.

6 Q. Right. So this was a lateral -- request for a  
7 lateral position, not a promotion?

8 A. I don't know if there was any promotion involved  
9 on it, as far as if there was compensation or anything of  
10 that nature. It's a different position.

11 Q. And it says within this email, "I'm wondering" --  
12 the second line -- "I'm wondering if that might be the best  
13 thing for both myself and the whole Flight Tech Team,"  
14 correct?

15 A. Yes.

16 Q. He's also looking out for Patrik, who is Patrik  
17 Gustavsson, who is also in this group; isn't that right?

18 A. Yes.

19 Q. And looking for Patrik Gustavsson to fill his role  
20 as chief tech pilot of the 737; isn't that correct?

21 A. It appears so, yes.

22 Q. Okay. If we can go to Government Exhibit 19.  
23 This is another email that you read on direct. I would like  
24 to just give a little bit of context.

25 This was dated November 3rd, 2016, from Mr. Mark

1 Forkner to others at Boeing. And within this email, I would  
2 like you to read that first -- the first two top paragraphs  
3 if you could.

4 A. Okay. He stated, "This must be fixed prior to  
5 EIS. We went out of our way in the FD requirements to  
6 minimize the training impact of the BRM logic, and one of  
7 the keys to that is to allow the start to look normal by  
8 having the crew observe an increasing N2 without the  
9 monitoring queue on its way up to 25 percent. We've already  
10 built and certified the training with the regulators based  
11 on this logic. We've already socialized with dozens of MAX  
12 customers. This was the design intent and what the  
13 regulators and customers expect.

14 "Remember, we only have provisional approval for  
15 Level B and for the CBT, as presented to the regulators.  
16 This would be an appreciable change to both the airplane and  
17 the training that would risk our Level B determination. I  
18 need to know ASAP if this will not be fixed prior to EIS, as  
19 we will have to negotiate this with the AEG."

20 Q. And as you've mentioned on direct, Agent Byers,  
21 the AEG was referring to Ms. Stacey Klein, correct?

22 A. Correct.

23 Q. And he's telling others at Boeing that something  
24 needs to be fixed; otherwise, he would have to go back to  
25 Ms. Klein to talk about it, correct? "We would have to

1 negotiate" --

2 A. "We would have to negotiate with the AEG," yes.

3 Q. Okay. And he also mentioned that he understands  
4 that the approval for Level B is only provisional; isn't  
5 that correct?

6 A. Yes, he states that.

7 Q. Okay. I would like to go to Government Exhibit  
8 21. Again, this is another email that you read parts of on  
9 direct. I would like to give more context.

10 If we go down to -- starting with email from  
11 Steven Burrington on November 10th of 2016, page 2.

12 No. It's November 10th, 2016, at 7:33 a.m.

13 MS. MCFARLANE: Can you hear me okay, Mr. Payton?  
14 There you go.

15 BY MS. MCFARLANE:

16 Q. And this -- this is November 10th. Is isn't that  
17 right, Agent Byers?

18 A. Yes, November 10 of 2016.

19 Q. And at this point in time, Boeing had received the  
20 provisional Level B training, correct?

21 A. Correct.

22 Q. And this was a few days before the chat, correct?

23 A. That's correct --

24 Q. All right.

25 A. -- the November 15 chat. There's a couple chats,

1 but the November 15th chat.

2 Q. November 15th chat. That's right.

3 Can you read starting with "Sean, while training,"  
4 please.

5 MR. O'NEILL: Objection. Is there a specific  
6 question? The jury has the exhibit in evidence.

7 THE COURT: Yes. Is there something you want to  
8 point to, because this is in evidence?

9 MS. MCFARLANE: Yes, your Honor, there is. The  
10 very first sentence.

11 BY MS. MCFARLANE:

12 Q. It says, "While training would be one  
13 consideration in making the MAX behavior different than the  
14 NG, there's also just the impact and risk of having a  
15 difference between the models." Correct?

16 A. Correct, as stated there, yes.

17 Q. And the impact between the models is sort of the  
18 impact of having a safety issue, in having differences  
19 between models, correct?

20 MR. O'NEILL: Objection, calls for speculation.

21 BY MS. MCFARLANE:

22 Q. Do you know?

23 THE COURT: Do you know?

24 THE WITNESS: Can you repeat your question again?

25 I'm sorry.

1 BY MS. MCFARLANE:

2 Q. When they're talking about differences between the  
3 models, correct?

4 A. Yes.

5 Q. And the two models we're talking about would be  
6 the NG, 737 NG, and the 737 MAX, correct?

7 A. Yes. Those are the two referenced here.

8 Q. And we're looking -- they are talking about the  
9 differences in changes between the MAX to the NG, correct?

10 A. Yes.

11 Q. Okay. And one of the considerations they talk  
12 about, in considering differences, would be training,  
13 correct?

14 A. Yes, that's what it references.

15 Q. All right. And other considerations would be  
16 impact and risk of having differences, correct?

17 A. I'm sorry. You're asking me to speculate on that?

18 Q. I'm not. I'm asking you, is that what it says in  
19 this email?

20 It says, "Impact and risk and training"; isn't  
21 that right?

22 A. I'm sorry. Where exactly are you referring to?  
23 I'm sorry. "There's just the impact and risk of having  
24 differences between the models." Yes, as referenced.

25 Q. Okay. Okay. And on direct you also read the



1 above email. And I'm not going to read it all here because  
2 the jury will have this, as we've said. But Mr. Forkner  
3 says, again -- if you look where it says, "in my opinion,"  
4 just above his signature block.

5 A. Yes.

6 Q. It says, "In my opinion, this must be fixed prior  
7 to the EIS. The impact to our customers is too great."

8 And the customers that Mr. Forkner is referring to  
9 are the airlines; isn't that correct?

10 A. Yes.

11 Q. Boeing's customers are airlines, like Southwest  
12 Airlines, American Airlines, correct?

13 A. Yes, ma'am.

14 Q. And what he's saying is, this must be fixed prior  
15 to EIS. The impacts are -- to Southwest and American is too  
16 great, is that correct, as an example?

17 A. Yes, it appears so.

18 Q. Okay. And then at the very top of the first page  
19 of this email, Mr. Forkner is talking to Christine Walsh.  
20 And you've testified already that Christine Walsh is another  
21 Boeing employee in the Flight Test Crew, right?

22 A. She is, yes.

23 Q. She is like the Top Gun test pilot, Christine  
24 Walsh?

25 MR. O'NEILL: Objection.

1 BY MS. MCFARLANE:

2 Q. Is that what you understand her to be?

3 A. I don't know exactly what her role is.

4 Q. Okay. But you understand her to be in the test  
5 crew, correct?

6 A. I know she's --

7 Q. The flight test crew?

8 A. -- a group within Boeing, yes.

9 Q. Okay. And Mark Forkner says, "No. No one listens  
10 to our inputs anyways. We are just peons. Everybody wants  
11 to change procedures without any regard for the impact to  
12 the crews. The emergency descent thing is a perfect  
13 example. But when our training level determination gets  
14 reversed because the program is too cheap to fix these  
15 issues prior to EIS and proceduralizes around all these  
16 last-minute issues, I'm the one who's going to take the  
17 fall. I'm really fed up."

18 That's Mark Forkner, right?

19 A. Yes.

20 Q. Okay. And this is the same issue that he's been  
21 saying to Boeing employees, to fix the EIS issue?

22 MR. O'NEILL: Objection, calls for speculation.

23 BY MS. MCFARLANE:

24 Q. Based on your review of this document.

25 THE COURT: Do you know?

1 THE WITNESS: I don't know.

2 THE COURT: Okay.

3 Ask your next question.

4 BY MS. MCFARLANE:

5 Q. Government Exhibit 11. The government had you  
6 talk about this on direct examination.

7 At the top two lines, Mark Forkner is writing to  
8 Ross Chamberlain. And Patrik Gustavsson was also in this  
9 group. And he says, "Patrik remembered the three tools to  
10 instructing with her: Fear, sarcasm, and ridicule."

11 Agent Byers, have you served in the military?

12 A. No.

13 Q. "Fear, sarcasm, and ridicule" is a common phrase  
14 used in the Air Force. Are you aware of that?

15 A. No.

16 Q. Are you aware that Mr. Forkner served in the Air  
17 Force?

18 A. That's my understanding, yes.

19 Q. Okay. And when Mr. Forkner writes, "Instructing  
20 with her," he's referring to instructing -- helping her in  
21 the simulator; isn't that correct?

22 MR. O'NEILL: Objection.

23 BY MS. MCFARLANE:

24 Q. Do you know?

25 A. I don't know.

1 Q. Okay.

2 MS. MCFARLANE: Your Honor, if I may have a moment  
3 to confer?

4 No further questions, your Honor.

5 MR. O'NEILL: Briefly, your Honor?

6 REDIRECT EXAMINATION

7 BY MR. O'NEILL:

8 Q. Special Agent Byers, Ms. McFarlane asked you on  
9 cross-examination a number of questions about Mr. Forkner's  
10 salary and how much money he made. Do you recall those  
11 questions?

12 A. I do, yes.

13 MR. O'NEILL: Can we pull up what's in evidence as  
14 Government Exhibit 15, please. If we could blow up the  
15 highlighted portion.

16 BY MR. O'NEILL:

17 Q. Special Agent Byers, when the defendant wrote --  
18 regarding his -- the airplane project with the AEG, and he  
19 wrote, "If I pull this off, I'll be a hero," did he put a  
20 dollar figure on that?

21 A. No, sir, he did not.

22 MR. O'NEILL: If we could please turn to what's in  
23 evidence as Government Exhibit 17. If we could please call  
24 out the top portion of the message.

25 ///

1 BY MR. O'NEILL:

2 Q. Special Agent, you will recall that the date of  
3 this email was August 16, 2016?

4 A. Yes, sir.

5 Q. That was the same day that the defendant wrote to  
6 his colleagues about provisional Level B approval for the  
7 MAX?

8 A. Correct.

9 Q. When the defendant wrote to Mr. Taylor at Boeing  
10 that "I'd like to discuss the 787 Chief Technical Pilot  
11 position with you," and he continues, "I'm wondering if it  
12 might be the best thing for myself and the whole team now  
13 that we've achieved Level B," did he put a dollar figure on  
14 that?

15 A. No, sir.

16 Q. On cross-examination, Ms. McFarlane asked you some  
17 questions about the Southwest Airlines contract provisions.  
18 Do you recall those questions?

19 A. I do, yes.

20 Q. And you were asked your understanding of those  
21 provisions. Do you remember that?

22 A. Yes.

23 Q. In the course of your review, do you ever see any  
24 documents where Mr. Forkner said that he felt he was  
25 mistaken about financial penalties to Boeing if they did not

1 achieve Level B training for the MAX?

2 A. No.

3 Q. On cross, you were also asked by Ms. McFarlane a  
4 number of questions about the volume of documents obtained  
5 during the course of your investigations. Do you remember  
6 those questions?

7 A. Yes.

8 Q. In the course of your investigation and review of  
9 documents, who wrote that he lied to the regulators?

10 MS. MCFARLANE: Objection. Misstates the  
11 evidence.

12 THE COURT: Overruled. The jury will remember the  
13 evidence.

14 THE WITNESS: He stated that he did, Mr. Forkner  
15 did.

16 BY MR. O'NEILL:

17 Q. Did Mr. Forkner state that in a document?

18 A. Yes, he did.

19 MR. O'NEILL: Could we pull up Government Exhibit  
20 22, please, which is in evidence.

21 BY MR. O'NEILL:

22 Q. And this is the two-page chat communication that  
23 we talked about.

24 MR. O'NEILL: Ms. Holbrook, could we pull up the  
25 two pages and call out the portions of the chat for

1 Mr. Forkner and Mr. Gustavsson?

2 BY MR. O'NEILL:

3 Q. Now, Special Agent Byers, Ms. McFarlane asked you  
4 on cross-examination a lot of questions about documents that  
5 may talk about MCAS that Mr. Forkner didn't receive. Do you  
6 recall those questions?

7 A. Yes.

8 Q. Okay. Now, looking at Government Exhibit 22, the  
9 chat communication with Mr. Forkner, what does Mr. Forkner  
10 say on November 15th, 2016, in his own words about how MCAS  
11 operates?

12 A. Down to Mach .2 -- or M .2.

13 Q. After noting in this communication that MCAS is  
14 now active down to M, or Mach .2, what does Mr. Forkner  
15 write with respect to regulators?

16 A. So that he basically lied to the regulators,  
17 unknowingly.

18 Q. You were asked on cross a number of questions  
19 about communications, Mr. Forkner's communication with  
20 Ms. Klein, Ms. Stacey Klein. Do you recall those questions?

21 A. Yes.

22 Q. And you were also asked about the volume of  
23 documents collected in your investigation. Do you remember  
24 those questions on cross?

25 A. Yes, sir.

1 Q. Special Agent, in over 57- -- approximately 57  
2 million pages -- I believe it was approximately 15 million  
3 documents -- in how many of those documents did the  
4 defendant tell Ms. Klein that MCAS was expanded and now  
5 active down to Mach .2?

6 A. None.

7 Q. Special Agent Byers, in all of those documents  
8 that you collected in the course of this investigation, the  
9 57 million pages, the 15 million documents, are you aware of  
10 a single document where the defendant disclosed the  
11 low-speed expansion of MCAS to anyone at the FAA?

12 A. No, sir.

13 MR. O'NEILL: Nothing further, your Honor.

14 MS. MCFARLANE: One point, your Honor.

15 Your Honor, may I approach the witness?

16 RE CROSS-EXAMINATION

17 BY MS. MCFARLANE:

18 Q. Agent Byers, if you could take a look at the  
19 documents I just handed to you.

20 A. Sure. Just one moment. Let me move some of this  
21 out of the way.

22 Q. Just let me know when you're ready.

23 A. Do you want me to look through all of them?

24 Q. Yeah, if you could look through all of them,  
25 please.



1 A. Okay.

2 MR. O'NEILL: Objection, your Honor. Is there a  
3 specific question?

4 THE COURT: Well, right now she's just asked him  
5 to look at these documents.

6 Have you seen these documents before?

7 THE WITNESS: I do not recall these documents,  
8 your Honor.

9 THE COURT: Okay.

10 BY MS. MCFARLANE:

11 Q. Whenever you're ready, Agent Byers.

12 THE COURT: Is there any way we can speed it up?  
13 He's not recognizing them. Is there anyway we can speed  
14 this up?

15 MS. MCFARLANE: There is, your Honor.

16 BY MS. MCFARLANE:

17 Q. These documents, if you recognize at the bottom of  
18 the right-hand corner, these are all Boeing records that the  
19 government produced to us from Boeing that you all -- that  
20 you and your investigation team received in the course of  
21 this investigation; isn't that correct?

22 A. Yes, I believe so.

23 Q. And they are all emails or chats from Boeing, from  
24 their official records that you, in your investigation,  
25 received as part of this investigation, correct?

1 A. Yes. It appears so, yes.

2 MS. MCFARLANE: Okay. Your Honor, the defense  
3 would like to offer Defense Exhibit 275 A through I. We  
4 have an authentication affidavit.

5 THE COURT: 275 A through I; is that right?  
6 Go ahead.

7 MR. O'NEILL: Your Honor, we object. These  
8 materials are irrelevant and beyond the scope of a very  
9 limited redirect.

10 THE COURT: Okay. I'll defer ruling on this until  
11 we get a witness up here that this is pertinent to, and so  
12 it's not admitted at this time.

13 MR. O'NEILL: It's also self-serving hearsay.

14 MS. MCFARLANE: Your Honor --

15 THE COURT: Very good. Ask your next question.

16 BY MS. MCFARLANE:

17 Q. In reviewing the records in this case, Agent  
18 Byers, you've reviewed many emails from Mark Forkner; is  
19 that correct?

20 A. I've reviewed some, yes.

21 Q. And in reviewing those emails you have reviewed,  
22 oftentimes, Mr. Forkner says, "I lied"; isn't that correct?

23 MR. O'NEILL: Objection, beyond the scope and  
24 relevance. Redirect about lies to the AEG, not lies in  
25 general.

1 THE COURT: Overruled.

2 THE WITNESS: I'm sorry.

3 THE COURT: Has he said "I lied" in other  
4 communications. That's the question. Do you know?

5 THE WITNESS: Yes.

6 BY MS. MCFARLANE:

7 Q. Yes, he has, correct?

8 A. Yes.

9 Q. He's said it numerous times in communication,  
10 official communication, "I lied" to various folks; isn't  
11 that correct?

12 A. I'm not sure who the various folks were.

13 Q. Various employees, others at Boeing; isn't that  
14 correct?

15 A. Yes.

16 MS. MCFARLANE: Your Honor, defense would like to  
17 move to admit Defense Exhibit 275 A through I.

18 THE COURT: Okay. That's denied. Ask another  
19 question.

20 MS. MCFARLANE: Okay.

21 THE COURT: We need to move, okay?

22 MS. MCFARLANE: Yes, your Honor. That's my final  
23 question, your Honor.

24 THE COURT: You may step down.

25 Call your next witness.

1 MR. ARMSTRONG: Your Honor, the United States  
2 calls Stacey Klein.

3 THE COURT: Just put everything on that table.  
4 Are you Stacey Klein?

5 THE WITNESS: I am.

6 THE COURT: Would you raise your hand to be sworn?  
7 (The oath was administered.)

8 THE WITNESS: I do.

9 THE COURT: Very good. Come have a seat.

10 MR. ARMSTRONG: Your Honor, before Ms. Klein  
11 testifies, I believe that we were going to offer Government  
12 Exhibits 9, 18, and 24 without objection.

13 THE COURT: Okay. Nine, 18 and 24 will be  
14 admitted.

15 (Government Exhibits 9, 18, and 24 were admitted  
16 into evidence.)

17 MR. ARMSTRONG: Thank you, Judge.

18 DIRECT EXAMINATION

19 BY MR. ARMSTRONG:

20 Q. Two minutes shy.

21 Good morning, ma'am.

22 A. Good morning.

23 Q. Please introduce yourself to the Jury and spell  
24 your name for the record.

25 A. Sure. My name is Stacey Klein, S-t-a-c-e-y,

1 K-l-e-i-n.

2 Q. And Ms. Klein, if I could ask you to speak into  
3 the microphone a little bit so we can hear you.

4 A. Yeah. Stacey Klein. S-t-a-c-e-y, K-l-e-i-n.

5 Q. Ms. Klein, where do you work?

6 A. I work for the Federal Aviation Administration.

7 Q. Is that also known as the FAA?

8 A. Yes.

9 Q. Generally speaking, what does the FAA do?

10 A. We provide aviation safety  
11 for particularly airliners and keep the public safe.

12 Q. You mentioned that you do public safety for  
13 airlines. Is that airlines here in America?

14 A. Yes, in the United States.

15 Q. Airlines like who and like what?

16 A. Airlines like Southwest, American, Delta, United.

17 Q. Ms. Klein, do you have a degree from Southern  
18 Illinois?

19 A. Yes. I have a bachelor of science degree in  
20 aviation management from Southern Illinois University.

21 Q. I'm sorry. Your bachelor of science was in what,  
22 ma'am?

23 A. Aviation management.

24 Q. And what year did you get that?

25 A. 1998.

1 Q. Ma'am, are you a pilot?

2 A. I am a pilot.

3 Q. How long have you been a pilot for?

4 A. Since 1992.

5 Q. What kind of planes have you flown?

6 A. I've flown everything from a Cessna 140, in which  
7 I learned on, to a 787 and a 747 Boeing aircraft.

8 Q. How does the Cessna you learned on compare to a  
9 787 or 737?

10 A. You pitch up, the houses get smaller. You pitch  
11 down, the houses get bigger. So they fly, basically.

12 Q. Is a Cessna like one of those, like, small, little  
13 one-propeller planes?

14 A. Yes, it's a small airplane with a little  
15 reciprocating engine.

16 Q. Were you also a check airman at some point?

17 A. Yes.

18 Q. What's a check airman?

19 A. A check airman is somebody who's blessed by the  
20 FAA to conduct training for airlines. And so I was a check  
21 airman, and a line check airman, so I also did line flight  
22 training.

23 Q. What do you mean "blessed by the FAA" to do pilot  
24 training?

25 A. So in addition to myself being a captain for the

1 airline, I had to qualify as somebody the FAA would trust to  
2 conduct flight training for our airline and also checking.

3 Q. And so as a check airman, who else did you  
4 actually train?

5 A. Our airline pilots.

6 Q. And how long did you do that for?

7 A. I was check airman for three and a half years.

8 Q. And where did you do that?

9 A. At Skyway Airlines.

10 Q. Are you also a captain?

11 A. Yes. I worked for Skyway Airlines for six and a  
12 half years; three and a half of which I was a captain and  
13 check airman for the company.

14 Q. Can you ballpark for the jury about how many hours  
15 you were a captain for Sky Airways?

16 A. Skyway Airlines. Um, I have 6800 hours total  
17 time. 3,000 of that was as a first officer, and about 1800  
18 as a captain and check airman before I joined the FAA.

19 Q. You mentioned that you at some point did join the  
20 FAA, right?

21 A. Yes.

22 Q. When did you join the FAA?

23 A. In May of 2006.

24 Q. Is where did you start out?

25 A. I started out as the assistant principal

1 operations inspector at the Milwaukee FSDO, the Flight  
2 Standard District Office.

3 Q. And generally speaking, what did you do there?

4 A. I provided oversight for Midwest Express Airlines  
5 to ensure that the airline was compliant with our Federal  
6 Aviation regulations.

7 Q. And for about how long did you do that for?

8 A. For three years.

9 Q. Where did you go next?

10 A. I joined the Seattle Aircraft Evaluation Group in  
11 2009.

12 Q. I'm sorry. Let me back up.

13 Before you joined the Seattle Aircraft Evaluation  
14 Group, are you familiar with the term "type rating" for  
15 pilots?

16 A. Yes.

17 Q. What does that mean "type rating" for pilots?

18 A. So any aircraft that's 12,500 pounds or greater,  
19 the pilot has to be trained in accordance with our Federal  
20 Aviation regulations, and then receive a type rating on that  
21 aircraft.

22 Q. And are you type-rated as a pilot?

23 A. Yes, I am.

24 Q. For how many planes are you type-rated for?

25 A. I hold seven type ratings.



1 Q. And can you rattle off the top of your head what  
2 those planes are?

3 A. Yes. Beech 1900D, which I flew for Skyway  
4 Airlines; DC-9; Boeing 737; Boeing 747-400, Boeing 787,  
5 Embraer 170, and an Embraer 190.

6 Q. That was seven type ratings, right?

7 A. That's correct, sir.

8 Q. Then you mentioned that you went to the Seattle  
9 Aircraft Evaluation Group, right?

10 A. Yes.

11 Q. Is that also known as the AEG for short?

12 A. Yes.

13 Q. Is the AEG part of the FAA?

14 A. Yes.

15 Q. What does the AEG do?

16 A. The AEG is -- I was a operations inspector, so as  
17 a pilot, we provided evaluation criteria for  
18 transport-category aircraft, so airliners in evaluating the  
19 type rating and the training required for airlines to fly.

20 Q. Okay. Ma'am, if I could ask you just to slow down  
21 just --

22 A. Yeah, sorry.

23 Q. You're talking very technically, so I want to make  
24 sure everyone gets it.

25 So at a high level, does the AEG set the level of

1 training for new versions of airlines?

2 A. Yes. We evaluate the training required for  
3 airlines and also the differences between different  
4 airplanes.

5 Q. And those airlines -- sorry. Is that evaluation  
6 for U.S.-based, or airlines here in the United States?

7 A. The United States.

8 Q. Where is the AEG based?

9 A. There's five different offices, and I worked for  
10 the Seattle AEG in Seattle, Washington.

11 Q. Do you still work for the AEG?

12 A. I do not.

13 Q. Why not?

14 A. I was promoted.

15 Q. When were you promoted?

16 A. January 2022.

17 Q. And where do you work now?

18 A. I'm the Denver Aircraft Certification Office  
19 branch manager.

20 Q. The Denver Aircraft Certification Office. Is that  
21 still part of the FAA?

22 A. Yes.

23 Q. Before you were promoted and went to the Aircraft  
24 Certification Office in Denver, how long did you work at the  
25 AEG in Seattle?

1           A.    I worked at the Seattle AEG from 2009,  
2   October 2009, until January 2022.

3           Q.    Is that about 13 years?

4           A.    Yes.

5           Q.    Are you familiar with The Boeing Company?

6           A.    Yes.

7           Q.    What's Boeing?

8           A.    Boeing is an aircraft manufacturer.

9           Q.    What do they manufacture?

10          A.    They manufacture airline jets.

11          Q.    And where does Boeing actually build the  
12   airplanes?

13          A.    They build airplanes in the Seattle area, as well  
14   as North Carolina.

15          Q.    And what is AEG's role with respect to the  
16   airlines or the aircrafts built by Boeing?

17          A.    Can you repeat the question?

18          Q.    Of course.

19                    What is AEG's role with respect to the aircrafts  
20   built by Boeing?

21          A.    We evaluate those aircraft for pilot training  
22   requirements.

23          Q.    Are you familiar with the 737?

24          A.    Yes, sir.

25          Q.    What's the 737?

1           A.    The 737 is an airplane that Boeing manufactures.  
2    It's a narrow-body, twin-engine aircraft.

3           Q.    How long has Boeing been manufacturing the 737  
4    for?

5           A.    The first aircraft, they started developing in  
6    1964, and it took flight, I believe, in 1968 or -7.

7           Q.    And so from the 1960s through around today, have  
8    there been different versions of the 737 along the way?

9           A.    Yes.

10          Q.    Are you familiar with the 737 NG and the 737 MAX?

11          A.    Yes. The 737 NG stands for "Next Generation." It  
12    was a family of aircraft that was developed and took flight  
13    in 1998.

14          Q.    And what's the 737 MAX?

15          A.    The 737 MAX is a family of aircraft that were  
16    developed after the NG, starting in 2012.

17          Q.    Did Boeing sell the MAX to airlines here in the  
18    United States?

19          A.    Yes.

20          Q.    To which airlines?

21          A.    Southwest, American, Alaska.

22          Q.    During your time at the AEG, did you actually work  
23    on the MAX?

24          A.    I did.

25          Q.    Around when did you first start working on the

1 MAX?

2 A. In May of 2012.

3 Q. What was your role in the AEG for the MAX?

4 A. I was the Boeing 737 Flight Standardization Board  
5 chairman.

6 Q. As the chairman of the MAX, did you have a team of  
7 other people working for you?

8 A. I did.

9 Q. About how many people?

10 A. There were two additional people. There was a  
11 team of three.

12 Q. And did the AEG's work on the MAX and your work as  
13 the chair involve something called "pilot differences  
14 training"?

15 A. Yes, sir.

16 Q. On a high level, what is pilot differences  
17 training?

18 A. Pilot differences training is new or modified,  
19 changed systems from whatever the base aircraft is to the  
20 new airplane. So you evaluate those differences.

21 Q. So in this case, what were you comparing to what  
22 for pilot differences training?

23 A. So for this example, we were comparing the 737 NG  
24 aircraft to the 737 MAX, the new and changed systems to  
25 evaluate for pilot training.

1 Q. And so were you looking at the new and changed  
2 systems on the MAX for purposes of pilot training?

3 A. Yes, sir.

4 Q. Why were you doing that? Why were you comparing  
5 the NG to the MAX for newer changed systems on the MAX?

6 A. So every aircraft that's developed has to receive  
7 some sort of rating on what training is required for the  
8 pilots to receive so that they can adequately fly the  
9 aircraft safely.

10 Q. Ma'am, as the chair, are you familiar with  
11 different levels of training?

12 A. Yes.

13 Q. What are the different levels of training?

14 A. There are different levels. There's Level A, all  
15 the way up to Level E. Level A training is simply a piece  
16 of paper that a pilot would receive that outlined what the  
17 difference is between those two airplanes all the way up to  
18 Level E, which requires hands-on training in a full flight  
19 simulator.

20 Q. And how do the levels differs among themselves?  
21 You mentioned Level A all the way up to Level E?

22 A. It's incrementally more training-intensive. So  
23 Level A to Level B requires another layer of training; Level  
24 B to Level C would require another layer of training, all  
25 the way up to Level E, where we're training in a full flight

1 simulator.

2 Q. So what's the least intense level of training?

3 A. Level A.

4 Q. And what is the highest intensity level of  
5 training?

6 A. Level E.

7 Q. Are you familiar with the Level B, as in "boy,"  
8 training?

9 A. Yes, sir.

10 Q. What's Level B training?

11 A. Level B training is computer-based training that's  
12 pushed out via computer or iPad.

13 Q. Are you familiar with simulator training?

14 A. Yes, sir.

15 Q. What level is that?

16 A. That's Level E.

17 Q. And at a high level, how does Level B, or the iPad  
18 training, compare with Level E, or the simulator training?

19 A. It's much more labor-intensive and requires a lot  
20 more training than a Level E; full flight simulator, Level  
21 E.

22 Q. So which one is more labor-intensive, Level E  
23 simulator training, or Level B, the iPad training?

24 A. Level E.

25 Q. Is differences training important for pilots here

1 in the United States?

2 A. Yes.

3 Q. Why is that?

4 A. Differences training establishes what the training  
5 requirements are for airlines, for their pilots to be able  
6 to fly the airplanes safely.

7 Q. And who makes that final decision about the level  
8 of training for pilots, for airlines like American and  
9 Southwest?

10 A. I did.

11 Q. Are you familiar with the Flight Standardized  
12 Board, or the FSB?

13 A. Yes, sir.

14 Q. What's the FSB?

15 A. The Flight Standardization Board is a group of  
16 professional pilots from different backgrounds that I, as  
17 the chair, put together in order to conduct the evaluation  
18 of those differences.

19 Q. And does the FSB, which you were the chair,  
20 ultimately set the level of pilot training for the MAX?

21 A. Yes.

22 Q. How many other people sat on the FSB with you?

23 A. For the 737 MAX, I think we had a total of 12.  
24 There may have been eight board members and then four  
25 airline pilots that also were participants on the board.



1 Q. And generally speaking, where did you pull these  
2 people from?

3 A. So the FAA members are pilots that work for the  
4 FAA in different realms, either providing oversight to the  
5 airlines themselves, or we had policy people who are  
6 intimately familiar with the policy. We also included  
7 flight test pilot on the board. And then the participants  
8 are actual airplane pilots who are flying the line for  
9 American, Alaska Airlines -- and I'm drawing a blank on the  
10 third. We included three different airlines.

11 Q. And, ma'am, I forgot to remind you, but you have a  
12 water bottle up there in case you get tired of talking.

13 A. Thanks.

14 Q. In 2016 and 2017, how many chairs were there on  
15 the FSB for the MAX?

16 A. Just one, myself.

17 Q. And what does that mean, that you were the chair  
18 of FSB for the MAX?

19 A. I had the ultimate decision in evaluating the  
20 training determination.

21 Q. Did you have the ultimate decision to set the  
22 level of training for the MAX?

23 A. Yes, sir.

24 Q. And did you, in 2017, set the level of training  
25 for the MAX?

1 A. Yes. I did.

2 Q. What level did you decide?

3 A. Level B.

4 Q. Is Level B that iPad training you mentioned  
5 before?

6 A. Yes.

7 Q. From the time you started working on the MAX  
8 around 2012 through 2017 when you set the level of training  
9 for the MAX, why did that take so long? Why did it take  
10 five years?

11 A. So the aircraft is being developed by engineers  
12 and it takes a long time to develop a new airplane. So  
13 Boeing's first presentation of what the MAX was going to be  
14 was in May of 2012, and then the final certification of the  
15 aircraft was, I believe, in March 2017.

16 Q. But, generally speaking, why did it take five  
17 years? Is it an easy job, a complex job?

18 A. No. It's a very complex job of developing the  
19 aircraft in accordance with our rules and regulations for  
20 aircraft certification. And then the job of the AEG is to  
21 evaluate all those type of differences during that time.

22 Q. Ms. Klein, do you know Mark Forkner?

23 A. I do.

24 Q. Where did you first meet Mark Forkner?

25 A. I first met Mark at the FAA when he was employed

1 there.

2 Q. Around when did you first meet Mr. Forkner?

3 A. I believe it was 2010.

4 Q. Where were you working at the times?

5 A. The AEG.

6 Q. Was Mr. Forkner also working at the AEG with you  
7 at the time?

8 A. No. Mr. Forkner worked for the Airports Division,  
9 I believe.

10 Q. The Airports Division, what was that?

11 A. The Airports Division. It's an area that they  
12 find compliance for airport development and, you know, U.S.  
13 airport Part 39.

14 Q. Did you work directly with Mr. Forkner at this  
15 time?

16 A. No.

17 Q. How did you get to know him?

18 A. We shared the same floor at the FAA office, and he  
19 would come over and visit from time to time.

20 Q. Were you aware that he was a pilot?

21 A. I was.

22 Q. At some point did he leave the Airport Division at  
23 the FAA?

24 A. Yes.

25 Q. Where did he go?

1 A. The Boeing Company.

2 Q. Once Mr. Forkner was at Boeing, did you have  
3 opportunities to actually deal with him at your job at the  
4 AEG?

5 A. Yes, sir.

6 Q. What did you deal with Mr. Forkner about when you  
7 were at AEG and he was at Boeing?

8 A. Mr. Forkner was the Boeing 737 chief technical  
9 pilot, so he was my direct counterpart at The Boeing  
10 Company.

11 Q. Do you see Mr. Forkner in court today?

12 A. I do.

13 Q. Can you please identify him by where he's sitting  
14 and what he's wearing?

15 A. Mark is sitting there in a white shirt and gray  
16 coat.

17 Q. Is he sitting right next to this lady right here?

18 A. Yes.

19 MR. ARMSTRONG: Your Honor, may the record reflect  
20 an in-court identification of Mr. Forkner?

21 THE COURT: Yes.

22 BY MR. ARMSTRONG:

23 Q. How often did you deal with Mr. Forkner when he  
24 was at Boeing?

25 A. As the chief technical pilot, he was my direct

1 counterpart. So I would have meetings with him. We had  
2 established meetings every other week, but we would see each  
3 other often in other certification meetings, and we'd get  
4 together for meetings at his office or my office.

5 Q. How frequently would you talk to him?

6 A. Every week.

7 Q. What did y'all talk about?

8 A. The Flight Standardized Board, evaluation of the  
9 MAX.

10 Q. What was his position at Boeing during the bulk of  
11 your work together with him on the MAX?

12 A. He was the chief technical pilot for the Boeing  
13 737.

14 Q. What does that mean, "He was the chief technical  
15 pilot"?

16 A. He was responsible for providing all the 737  
17 material to the AEG. So the design changes, the design of  
18 the aircraft; evaluate what the training requirements would  
19 be; create the plan for the evaluation; give that as a  
20 proposal to myself and my team members.

21 Q. About how far was his office from yours outside  
22 Seattle?

23 A. I was two blocks away.

24 Q. As the chief technical pilot, did Mr. Forkner have  
25 a specific group at Boeing?

1 A. Yes. He worked in the Flight Technical Group.

2 Q. Did he have people in that group working with him?

3 A. Yes.

4 Q. About how many?

5 A. Six.

6 Q. Who was the chief of that group, from your  
7 perspective?

8 A. It was Mark Forkner.

9 Q. How would you describe his position within his  
10 team at Boeing?

11 A. I would describe him as the boss.

12 Q. Why do you say that?

13 A. He's the chief technical pilot.

14 Q. How would you describe Mr. Forkner's position as  
15 the chief technical pilot compared to yours as the chair of  
16 the FSB?

17 A. He was my direct counterpart.

18 Q. Why do you say that?

19 A. That's how it works, in that there's a single  
20 point of contact at the manufacturer that proposes all of  
21 the design changes and the training requirements to the FSB  
22 chair of that aircraft. So each individual aircraft has its  
23 own team, and there is a chief technical pilot on the  
24 manufacturer's side and there is an FSB chair that works for  
25 the government, the AEG, that's assigned to that aircraft

1 fleet.

2 Q. And who is of that single point of contact at  
3 Boeing for you?

4 A. It was Mark Forkner.

5 Q. Was Mr. Forkner's job as the chief technical pilot  
6 at Boeing important to your job as chair of FSB?

7 A. Yes.

8 Q. Why?

9 A. It's how we got information on what the training  
10 differences would be based on what those system designs  
11 were.

12 Q. For what plane?

13 A. For the 737 MAX.

14 Q. Could you do your job as the chair of the FSB if  
15 Mr. Forkner didn't do his job?

16 A. No.

17 Q. Why not?

18 A. I solely relied and trusted Mark Forkner to  
19 provide all of that information.

20 Q. Provide what information?

21 A. The system differences and the design changes of  
22 the aircraft.

23 Q. To decide the level of training for the MAX, what  
24 information did you need to receive?

25 A. I would need accurate, true design information on

1 what the design of the aircraft is.

2 Q. Did you need complete information or incomplete  
3 information?

4 A. Complete.

5 Q. Was it important to your job that you receive  
6 true, accurate, and complete information about the MAX?

7 A. Yes, sir.

8 Q. Can you explain why?

9 A. It's essential. We can't evaluate the aircraft  
10 without true and complete information, and then keep the  
11 public safe.

12 Q. And from whom did you need to receive true,  
13 accurate, and complete information about the MAX?

14 A. Mr. Forkner.

15 Q. Who did you rely on to give you that information?

16 A. Mark Forkner.

17 Q. Who did you trust?

18 A. Mark Forkner.

19 Q. Was that normal or abnormal that you would rely on  
20 someone at the manufacturer to provide you that true,  
21 accurate, and complete information on the plane that you  
22 were evaluating at the AEG?

23 A. It's normal.

24 Q. How so?

25 A. It's what our guidance and regulation is based off



1 of, of mutual trust between the manufacturer and the  
2 regulator; that they will provide detailed design  
3 information. And so I relied on Mark Forkner for that  
4 detailed design information to evaluate the training  
5 differences.

6 Q. During your evaluation of the MAX, did you come to  
7 learn the resources that Mr. Forkner had at Boeing?

8 A. Yes, sir.

9 Q. How did you learn that?

10 A. We would attend Aircraft Certification Office  
11 meetings where Boeing engineers and our flight test pilots  
12 and Mark Forkner and his team would attend. So we got to  
13 know a lot of the engineers that would develop those  
14 presentations, to present to all of us as regulators; so our  
15 aircraft certification branch, and the flight test branch  
16 and then myself and my team.

17 Q. How would you describe the level of resources that  
18 Mark Forkner had at his disposal at Boeing?

19 A. A lot. They develop the airplane, so they have  
20 thousands of people that work there doing that.

21 Q. And how would you compare that level of resources  
22 that Mr. Forkner had at Boeing to the level of resources  
23 that you had at the AEG?

24 A. We didn't have as many. We provide the oversight,  
25 so I had a team of three to evaluate, for myself, I can

1 speak. That's how many people we had.

2 Q. Now, when you ultimately set -- when you first  
3 set -- I apologize.

4 When you first set Level B for the MAX back in  
5 July of 2017, did you believe that Mr. Forkner had provided  
6 you true, accurate, and complete information about the MAX?

7 A. Yes, sir.

8 Q. What do you believe now?

9 A. That is not true.

10 Q. What's not true?

11 A. That it was not true and accurate information.

12 Q. Ma'am, are you familiar with something called the  
13 "Maneuvering Characteristics Augmentation System"?

14 A. Yes, sir.

15 Q. Is that also known as "MCAS," M-C-A-S?

16 A. Yes.

17 Q. And did you learn about MCAS during the course of  
18 your evaluation of the MAX?

19 A. Yes.

20 Q. Generally speaking, if MCAS kicked in, what would  
21 that do for the front, or the nose, of the plane?

22 A. It would push the nose of the aircraft down.

23 Q. And if the nose of the plane is pushed down, how  
24 does that affect the flight of the plane?

25 A. The flight of the aircraft goes down.

1 Q. During your evaluation of the MAX, what was your  
2 understanding of the speeds at which MCAS could operate?

3 A. I first learned about MCAS in 2015, and the speeds  
4 are high speeds; so .7 Mach and above.

5 Q. I'm sorry. You said what speed specifically?

6 A. High speed.

7 Q. And you mentioned a Mach number. What Mach number  
8 did you mention?

9 A. .7 Mach and above.

10 Q. At any point in your evaluation of the MAX, did  
11 you learn that MCAS could operate at speeds below .7 Mach?

12 A. No, I did not.

13 Q. During your evaluation of the MAX, what was your  
14 understanding of when MCAS could operate in normal passenger  
15 flight?

16 MS. MCFARLANE: Your Honor, objection. Can we  
17 have a time frame for evaluation of the MAX?

18 MR. ARMSTRONG: Sure.

19 BY MR. ARMSTRONG:

20 Q. Ms. Klein, at any point from 2015 through 2017,  
21 what was your understanding of when MCAS could operate a  
22 normal passenger flight?

23 A. Never.

24 Q. Based on that understanding, what level of  
25 training did you set for the MAX?

1 A. B level training.

2 Q. And is that the level you set in July of 2017?

3 A. Yes, sir.

4 Q. In October 2018, was there an incident with the  
5 MAX?

6 A. Yes.

7 Q. About how long after you set Level B for the MAX  
8 was this incident?

9 A. A year and a half.

10 Q. Around the time of this incident, did you learn  
11 about the speeds when MCAS could actually kick in?

12 A. Yes.

13 Q. What did you learn?

14 A. That MCAS had been expanded down to Mach .2, which  
15 is a slow, low, airspeed.

16 Q. Mach .2?

17 A. Yes, sir.

18 Q. Was the fact that MCAS was expanded at the low  
19 speeds like Mach .2 new information to you?

20 A. Yes. It was new information.

21 Q. Can you explain why?

22 A. I -- the understanding that I had based on the  
23 presentation and system design information that was provided  
24 through the FCOM, which is the Flight Crew Operating Manual,  
25 was a high-speed, high-G maneuver that MCAS would actually

1 activate.

2 So learning about the expansion of MCAS after the  
3 2018 incident was quite a surprise.

4 Q. Who provided the information to you at the time of  
5 your evaluation about how MCAS only operated at high speeds?

6 A. Mr. Forkner.

7 Q. At the time of your evaluation, did you have any  
8 idea that MCAS could operate all the way down to low speeds  
9 like Mach .2?

10 A. No.

11 Q. After the incident in 2018, did you come to learn  
12 if anybody else in this courtroom saw that MCAS could be  
13 active all the way down to Mach .2?

14 A. I did.

15 Q. Who?

16 A. Mark Forkner.

17 Q. How did you learn that?

18 A. I learned that from an internal text message that  
19 was publicized in 2019.

20 Q. Whose text message?

21 A. Mark Forkner and Patrik Gustavsson.

22 Q. Did Mr. Forkner ever share with you how MCAS could  
23 be active down to Mach .2 during your evaluation of the MAX?

24 A. No.

25 Q. Did you want to know that?

1 A. Yes.

2 Q. Why?

3 A. So we could evaluate it for pilot training, keep  
4 the public safe.

5 Q. How could knowing that fact have affected your  
6 evaluation of the 737 MAX?

7 A. It would have affected the Level B determination.

8 Q. How so?

9 A. The evaluation -- we would have had to redo the  
10 evaluation for all the required pilot training maneuvers  
11 that are required under our regulations, and upon doing so,  
12 that would determine if Level E training could be  
13 sufficient.

14 Q. Level B training to be sufficient or insufficient?

15 A. No. I said Level E training would be sufficient  
16 was what the determination was after we evaluated it.

17 Q. And Level E training, was what kind of training?

18 A. Full flight simulator training.

19 Q. Ma'am, showing you Government Exhibit 227.

20 MR. ARMSTRONG: And Ms. Holbrook, if you can  
21 please pull up the top, please.

22 BY MR. ARMSTRONG:

23 Q. Ma'am, what's the date of this chat?

24 A. It's November 15th, 2016.

25 Q. And who are the participants?

1           A.    It's an instant message between Mark Forkner and  
2 Patrik Gustavsson.

3           Q.    Is this the chat you saw after the 2018 incident  
4 that you referenced?

5           A.    Yes.  And October 2019 is when this was brought to  
6 my attention.

7           Q.    So this chat was brought to your attention about  
8 three years after the fact?

9           A.    Yes, sir.

10           MR. ARMSTRONG:  And Ms. Holbrook, can you please  
11 blow-up the bottom 650 to 651, please.

12 BY MR. ARMSTRONG:

13           Q.    Ma'am, are those the words that you saw in 2019?

14           A.    Yes, they are.

15           Q.    Including, "MCAS is now active down to Mach .2,  
16 and so I basically lied to the regulators, unknowingly"?

17           A.    Yes.

18           Q.    And whose words are those?

19           A.    Mark Forkner.

20           Q.    How long after you set Level B for the MAX did you  
21 see those words?

22           A.    What was that, two and a half years?  I saw these  
23 in October of 2019.  We set the level of training in 2017.

24           Q.    What was your reaction when you saw these words  
25 about two years after your evaluation of the MAX?

1           A.    I was shocked, dismayed, sad, angry. All of the  
2 feelings.

3           Q.    Why is that?

4           A.    Because I trusted Mark. And I trusted him to give  
5 me this information.

6           THE COURT: Okay. Why don't we go ahead and take  
7 our lunch break now. We have ordered you in sandwiches, so  
8 you will have sandwiches back upstairs when you go back  
9 upstairs. It's good today, because we have bad weather  
10 today, so you don't have to go out to get food if you don't  
11 want to. Of course, if you want to, you can.

12           We'll start back up -- why don't we start back up  
13 at about 1:45? And in the meantime, please remember all of  
14 my instructions. Please avoid any push notifications, news  
15 stories. Don't conduct any independent investigation.  
16 Don't read any news stories that might mention anything  
17 about this case.

18           We'll get you back in just as soon as everybody is  
19 back here and you-all are ready to go. We will get you back  
20 in, and we will keep going through the testimony. So we  
21 will see you after lunch.

22           All rise.

23           (A recess was had at 12:31 p.m.)

24           THE COURT SECURITY OFFICER: All rise.

25           THE COURT: Okay. Please be seated.



1           It looks like we are missing a participant or two.  
2 They should be here, and we can get started.

3           (Discussion off the record.)

4           THE COURT: Where is the witness?

5           MR. ARMSTRONG: The witness is in the hallway,  
6 your Honor.

7           THE COURT: Let's go ahead and get them in here.

8           (Thereupon, the witness entered the courtroom.)

9           DIRECT EXAMINATION -- CONTINUED

10 BY MR. ARMSTRONG:

11           Q. All right, ma'am. Good afternoon.

12           A. Good afternoon.

13           MR. ARMSTRONG: If you will pull up Exhibit 22,  
14 please.

15           Please put up the time and date of the chat and  
16 the chat, Exhibit 22, starting with 6:50 all the way down to  
17 the bottom, please.

18           THE WITNESS: Is it supposed to be populated on  
19 this the screen here?

20 BY MR. ARMSTRONG:

21           Q. Yes, ma'am.

22           A. It is not.

23           THE COURT: I haven't done anything.

24 BY MR. ARMSTRONG:

25           Q. This document is in evidence, GE-22.

1 Can you see it?

2 THE COURT: Maybe you hit the machine somehow.

3 MR. ARMSTRONG: Your Honor, may I approach?

4 THE WITNESS: Okay. It is up.

5 BY MR. ARMSTRONG:

6 Q. All right. Ms. Klein, right before the break, we  
7 are talking about Mr. Forkner's words on November 15, 2016,  
8 right?

9 A. Yes, sir.

10 Q. Who is Mr. Forkner telling the MCAS is not active  
11 down to Mach .2 and regulators knowing --

12 A. This is a communication between Mark Forkner and  
13 Patrik Gustavsson.

14 Q. Do you know who Patrik Gustavsson is?

15 A. Excuse me. Yes, sir.

16 Q. Who was Mr. Gustavsson or Gustavsson?

17 A. Gustavsson. I pronounce it Gustavsson.

18 Q. Who was Mr. Gustavsson at the time back in  
19 November of 2016?

20 A. Patrick was Mark's deputy chief pilot.

21 Q. What was role compared to Mr. Forkner's role back  
22 in November 2016?

23 A. He worked for Mark.

24 Q. Now, ma'am, are you included on this chat?

25 A. No.

1 Q. Did Mr. Forkner share this chat with you at the  
2 time, back in November of 2016?

3 A. No, he did not.

4 Q. Did you have access to it?

5 A. No, I do not.

6 Q. Why not?

7 A. This is an internal Boeing instant message between  
8 himself and Mr. Gustavsson.

9 Q. Did Mr. Forkner ever share this chat with you at  
10 any point?

11 A. No, he did not.

12 Q. Mr. Forkner writes, "MCAS is now active down to  
13 M.2."

14 Do you see that, ma'am?

15 A. Yes.

16 Q. Are you familiar with the term M.2?

17 A. Yes, that is Mach .2.

18 Q. Is Mach .2 high speed or low speed?

19 A. Low speed.

20 Q. What does that mean to you, "MCAS is now active  
21 down to Mach .2"?

22 A. It means that the functioning of the software is  
23 now active, has been expanded down to a low speed aircraft  
24 regime.

25 Q. Based on this chat, at what speed could MCAS now

1 operate -- operable down to Mach .2?

2 A. During a normal airline flight.

3 Q. At what basis of flight does a plane normal  
4 operate in at speeds Mach .2 or low speed?

5 A. Takeoff and landing.

6 Q. Are you familiar with the phase "critical phase of  
7 flight"?

8 A. Yes, sir.

9 Q. What is that?

10 A. The critical phase of flight is the flight during  
11 takeoff and landing in which if anything were to go wrong,  
12 its critical and you have to be able to recover.

13 Q. So why is takeoff and landing a critical phase of  
14 flight?

15 A. Because if anything goes wrong, you have very  
16 little time to recover. You are close to the ground.

17 Q. How important is pilot training during this  
18 critical phase of flight?

19 A. It's essential. The majority of all of our pilot  
20 training happens essential below 5,000 feet from the ground.

21 Q. And when a plane is going Mach .2 or around there,  
22 is that high in the sky or low in the sky?

23 A. Low in the sky.

24 Q. Would it have been important for you to know at  
25 the time that MCAS is now active down to Mach .2?

1 A. Yes, sir.

2 Q. Can you explain why?

3 A. We would need to evaluate it for all the required  
4 parking lot training requirements to see how it would  
5 interact with the system and how it would fail, so we could  
6 evaluate what type of pilot training would be required when  
7 it is operative and when it's inoperative.

8 Q. Were you able to evaluate MCAS at low speed for  
9 how it operated, what it interacted with and what happens  
10 when it failed at the time?

11 A. No, I did not.

12 Q. Why not?

13 A. I didn't know that the software had been expanded  
14 to include a normal operating envelope.

15 Q. Back in November 2016, at what speeds did you  
16 think MCAS could operate?

17 A. Only high speeds, above Mach .7.

18 Q. Did you believe at the time that MCAS could kick  
19 in or could not kick in during passenger flights?

20 A. It would not kick in during a normal passenger  
21 flight.

22 Q. When MCAS is active down to Mach .2, could MCAS  
23 now kick in during a passenger flight?

24 A. Yes, depending on the conditions.

25 Q. Mr. Forkner writes here at 6:51, "So I basically

1     lied to the regulators unknowingly."

2             Do you see that, ma'am?

3     A.    Yes, sir.

4     Q.    Who was the regulator working with Mr. Forkner  
5   back in November 2016?

6     A.    I was.

7     Q.    And what were you working with Mr. Forkner on?

8     A.    The Flight Standardization Board evaluation.

9     Q.    Who did you rely on to tell you that MCAS had been  
10  expanded and changed from high speeds?

11    A.    I relied on Mark Forkner to do that.

12    Q.    When would you have wanted Mr. Forkner to tell you  
13  that MCAS was now active down to Mach .2 or low speed?

14    A.    As soon as he learned about it.

15    Q.    Why is that?

16    A.    It is a system based on trust. We rely on the  
17  manufacturer to tell us about the designs so that we can  
18  evaluate them for pilot training and safety.

19             So I trusted Mark to do that.

20    Q.    Did Mr. Forkner ever tell you that MCAS is now  
21  active down to Mach .2?

22    A.    No, he did not.

23    Q.    At the time of this chat in November 2016, were  
24  you close to finalizing your Level B decision for the MAX?

25    A.    Yes. We had already conducted the evaluation of

1 the training and provided a provisional approval for Level  
2 B, pending the certification of the aircraft and no design  
3 changes.

4 Q. And how close were you to actually finalizing that  
5 level of pilot training decision?

6 A. We finalized that decision in July of 2017.

7 Q. Even if you were close to finalizing your final,  
8 what would be your decision for the MAX, is there any  
9 scenario in which you didn't want to know about the  
10 low-speed expansion of MCAS?

11 A. No.

12 Q. About how many times after November 16th -- I'm  
13 sorry -- after November 2016 did you talk with Mr. Forkner?

14 A. A lot. We met often.

15 Q. In person or over the phone?

16 A. Both.

17 Q. In any of these conversations, did he tell you  
18 that MCAS was active down to low speeds?

19 A. No, he did not.

20 Q. Shifting gears, during your evaluation of the MAX,  
21 did you and Mr. Forkner ever talk about the level of  
22 training that he thought was appropriate for the MAX?

23 A. Yes.

24 Q. So what did he tell you?

25 A. That it would be Level B differences training.

1 Level B would be appropriate.

2 Q. So he told you that it will be Level B?

3 A. Yes, sir.

4 Q. How often would he say the MAX will be Level B?

5 A. In the beginning, really often. It was the main  
6 topic of conversation as we were trying to understand the  
7 system design.

8 Q. Would he tell you this in person or over the  
9 phone?

10 A. In person.

11 Q. Who was the ultimate decision maker about the  
12 level of pilot training for the MAX?

13 A. I was.

14 Q. Did you ever raise with Mr. Forkner the  
15 possibility that it might not be Level B?

16 A. Yes. I was very concerned that the system design  
17 on the MAX would not qualify for Level B, and so I had  
18 raised that concern with him as well as up my supervisory  
19 chain.

20 Q. When you raised those concerns with him, would he  
21 agree with you?

22 A. No, he would not.

23 Q. What would he tell you in response?

24 A. He would try to identify regulations where Level B  
25 would be sufficient or training would not be required.



1 Q. Would he tell you if you were right or wrong?

2 A. He would tell me I was wrong.

3 Q. How would he speak to you when he was telling you  
4 that?

5 A. In the beginning, Mark would be aggravated,  
6 irritated with the process.

7 Q. What do you mean he was agitated and irritated?

8 A. He would be in the meetings, he would get  
9 irritated, red faced, raise his voice at me. He would be  
10 angry.

11 Q. Would he do anything physically when he was  
12 getting red in the face and getting irritated at these Level  
13 B conversations?

14 A. Yes. He would be red faced and slam his hands  
15 down on the conference room table.

16 Q. Had you ever encountered anything like that in  
17 your work in the AEG reports?

18 A. No. It was very unprofessional.

19 Q. Did you feel like Mr. Forkner was open at all to  
20 the possibility of training for the MAX above Level B?

21 A. No.

22 Q. Why do you say that?

23 A. Well, we couldn't have a normal conversation about  
24 what would qualify for the training. And so the meetings  
25 were very contentious and difficult to have a mutual

1 understanding that we were trying to evaluate for safety.

2 Q. How would you describe overall his attitude  
3 towards the AEG's process and the AEG's evaluation?

4 A. I would describe it as being irritated, at trying  
5 to follow that process.

6 He felt that a lower level of training would be  
7 sufficient and that they wouldn't even have to follow the  
8 process. They could just do what was called a T1 test at  
9 the time.

10 Q. Were you concerned at all about his attitude at  
11 the time?

12 A. Yes.

13 Q. Did you raise your concerns with anybody?

14 A. I raised my concerns with my supervisors.

15 Q. Despite your concerns, did you keep working with  
16 Mr. Forkner?

17 A. Yes, I did.

18 Q. Why is that?

19 A. I didn't have a choice. Mr. Forkner was the chief  
20 technical pilot, and so I started documenting everything and  
21 writing it down in issue papers and briefing papers up to  
22 our executive leadership in DC.

23 Q. Overall, how would you characterize how Mr.  
24 Forkner acted towards you and your colleagues at AEG during  
25 your evaluation of the MAX?

1 A. I felt like he was a bully.

2 Q. Did he ever stop being a bully towards you and  
3 your colleagues at AEG?

4 A. Yes.

5 Q. When?

6 A. Once we agreed to evaluate the aircraft for their  
7 proposal at Level B, it became a much more mutual,  
8 professional engagement between myself and Mr. Forkner.

9 Q. When Mr. Forkner told you that the MAX will be  
10 Level B, did he tell you why he thought that?

11 A. Yes. Boeing had sold the aircraft to their  
12 airlines to be no greater than Level B training.

13 Q. Is that what he actually told you?

14 A. Yes.

15 Q. And when you said the airlines, did you take it  
16 mean airlines like American and Southwest?

17 A. Yes.

18 Q. What did Mr. Forkner say about the financial  
19 importance of Level B to Boeing?

20 A. That it would be very expensive to be greater than  
21 Level B; that they had sold the aircraft as Level B.

22 Q. Very expensive to who?

23 A. The airlines.

24 Q. Based upon your experience, would a lower level of  
25 training, like computer-based train or iPad training, save

1 money for airlines like American and Southwest compared to  
2 simulator training?

3 A. Yes. Training via CBT, or a computer-based  
4 training module is a lot less expensive than a full flight  
5 simulator.

6 Q. Can you explain why the iPad training is  
7 essentially cheaper than the simulator training?

8 A. Sure.

9 An iPad, all pilots are issued an iPad at the  
10 airlines. And so they can conduct that training, you know,  
11 while they're on the road, on an overnight, or at their home  
12 base at home.

13 In a full flight simulator training or hands-on  
14 experience requires the flight crew to be taken off the line  
15 flying. They have to -- you know, the airline has to invest  
16 in the cost of the simulator, which is millions of dollars,  
17 they have to have facilities to host that. They need to  
18 have flight instructors, sim technicians. It is a very  
19 expensive undertaking.

20 Q. You mentioned that pilots have to be taken off the  
21 line for simulator training.

22 What does that mean?

23 A. So a pilot is issued what we call a line segment  
24 for the month. And they would have to not fly their  
25 scheduled trips and come to their training facility and

1 spend several days in a hotel, and receive that training  
2 with the training instructors.

3 Q. How much more expensive, generally speaking, is  
4 simulator training compared to iPad training for the  
5 airline?

6 A. It is very expensive.

7 To rent a simulator is anywhere from 400 to \$1,500  
8 an hour, typically, for an airline. And then the cost of  
9 the instructor, the training of having to come in do ground  
10 training and then flight training.

11 It gets very costly.

12 Q. Back in 2017, could American or Southwest even  
13 have the ability to train their pilots on simulators for the  
14 MAX?

15 A. No.

16 Q. Why not?

17 A. Because Boeing was not going to be developing a  
18 simulator for the MAX.

19 Q. Were there even enough simulators to go around  
20 back in 2017 to train all the pilots?

21 A. No. The idea would be that the airlines would  
22 train their pilots on the NG, and then receive the  
23 differences training via the CBT in an iPad training.

24 Q. Ma'am, I'm shifting gears.

25 Was MCAS on any version of the 737 before the MAX?

1 A. No, it was not.

2 Q. Around June 2015, did you receive information  
3 about MCAS and how it works?

4 A. Yes.

5 Q. How did you receive this information?

6 A. Boeing came over to the Seattle AEG's conference  
7 room and did a presentation on flight controls, so all the  
8 different changes to the flight control system.

9 Q. This presentation was at the AEG's office?

10 A. Yes, sir.

11 Q. What was the purpose of this presentation, from  
12 your perspective?

13 A. The purpose was to educate the AEG, myself, our  
14 aircraft certification engineers, the program manager and  
15 the flight test pilots on what the system differences were  
16 between the NG and the MAX.

17 Q. Were there any particular types of system  
18 differences that were included in this presentation?

19 A. Yes.

20 There were all kinds of system differences on the  
21 737 MAX flight control system. There were many different  
22 changes, including MCAS.

23 Q. So was the presentation essentially about flight  
24 controls on the MAX?

25 A. Yes.

1 Q. What are flight controls?

2 A. Flight controls are the surfaces used to turn the  
3 aircraft to pitch the aircraft up and down. It's connected  
4 to the yoke or steering wheel that the pilot controls to  
5 maneuver the aircraft.

6 Q. Were your team members from the AEG also at the  
7 presentation about flight controls in June 2015?

8 A. Yes, they were.

9 Q. Who was actually presenting the information?

10 A. A flight controls engineer at the Boeing Company  
11 was presenting the information.

12 Q. Was Mr. Forkner there?

13 A. Yes, he was.

14 Q. Let's talk about what you learned about MCAS.

15 MR. ARMSTRONG: GX-9, please, already in evidence.

16 And, Ms. Holbrook, can you please blow up that  
17 part, please?

18 It is right there. Perfect.

19 Thank you, ma'am.

20 BY MR. ARMSTRONG:

21 Q. Ms. Klein, do you recognize this document?

22 A. Ah, yes.

23 Q. What is it?

24 A. This is an email from Ross Chamberlain to myself,  
25 copying Mark.

1 Q. And what is the date?

2 A. June 23rd, 2015.

3 Q. And what is the subject?

4 A. Presentations from June 16th meeting.

5 Q. Taking a step back, who is Ross Chamberlain?

6 A. Ross Chamberlain worked for Mark. He was a pilot  
7 and was an administrative support team member for Mark.

8 Q. When you say that Mr. Chamberlain was  
9 administrative support, what does that mean?

10 A. He helped produce all of the -- the  
11 documentations, the plans, you know, the Word documents that  
12 would then be sent to myself and my team.

13 Q. And what does Mr. Chamberlain write to you in the  
14 email on which Mr. Forkner is copied?

15 A. He says, "Stacey, there are four .pdf files of the  
16 presentations given last Tuesday. The files are large. I  
17 will split them into two emails. Please forward the files  
18 to EASA and Transport Canada."

19 Q. Did Mr. Chamberlain include in this email the  
20 flight controls presentation from June 2015 that you  
21 mentioned a few minutes ago?

22 A. Ah, yes. There's two attachments, one for the 737  
23 MAX -- MAX display system and the 737 MAX flight controls  
24 overview.

25 MR. ARMSTRONG: Ms. Holbrook, if you could please



1 take that down.

2 Please go to page 43 of Government Exhibit 9,  
3 please.

4 BY MR. ARMSTRONG:

5 Q. Ma'am, do you recognize page 43 of Government  
6 Exhibit 9?

7 A. Yes.

8 Q. What is it?

9 A. That is the maneuver characteristics augmentation  
10 system, MCAS system overview.

11 Q. Is this a slide that you received in this  
12 June 2015 meeting at the AEG?

13 A. Yes, sir.

14 MR. ARMSTRONG: Ms. Holbrook, if you can please  
15 blow up MCAS operational envelope, please.

16 And, Ms. Holbrook, if you can please highlight the  
17 second bullet.

18 BY MR. ARMSTRONG:

19 Q. Ma'am, can you read that to the Jury?

20 A. "Operate flaps up in Mach number range .7 to .8."

21 Q. So, Ms. Klein, what were you told at this  
22 June 2015 meeting about the speeds at which the MCAS would  
23 operate?

24 A. The speeds would be high-speed above Mach .7 to  
25 .8.

1 Q. About how fast is .7, .8 in miles per hour,  
2 ballpark?

3 A. 430 to 450 miles an hour.

4 Q. And at what phase of flight would be the plane be  
5 going at .7, .8 Mach or about 420 or 430 miles an hour?

6 A. At cruise. So high speed.

7 Q. Is that high in the sky or low in the sky?

8 A. High in the sky.

9 Q. Does the plane ever going .7 or .8 Mach during  
10 takeoff and landing?

11 A. No.

12 Q. Why not?

13 A. An airplane can't take off and land at that speed.

14 MR. ARMSTRONG: Ms. Holbrook, if you can please  
15 highlight the first bullet point on page 43 of Government  
16 Exhibit 9.

17 BY MR. ARMSTRONG:

18 Q. Ma'am, can you please read that to the jury?

19 A. "Operates outside of normal operating envelope."

20 Q. What does this phrase mean, "normal operating  
21 envelope"?

22 A. The normal operating envelope is an envelope in  
23 which the aircraft flies at max capacity, so all of the  
24 passengers on board, baggage on board, from taxi, takeoff,  
25 climb out, cruise, descent, approach to landing, landing and

1 taxiing in. It is the envelope in which the aircraft would  
2 normally do an airline flight from, say, Dallas to Chicago  
3 or something.

4 Q. Essentially it is a gate-to-gate flight?

5 A. Yes. Yeah.

6 Q. So on this slide it says, "MCAS operates outside  
7 of the normal operating envelope."

8 When you saw this information at the time, what  
9 did you understand this to mean?

10 A. That MCAS would not activate during the normal  
11 course of a flight.

12 Q. And were you given any examples about when MCAS  
13 would actually operate, if it wasn't going to operate during  
14 gate-to-gate or normal passenger flight?

15 A. Yes.

16 So the conditions in which MCAS would activate  
17 would be above Mach .7 to .8. It would have to be at a high  
18 angle of attack. The aircraft would have to be pulling  
19 above 1.3 Gs. And in order for an airplane to be in that  
20 condition, you would be doing what's called a high-speed  
21 wind-up turn.

22 Q. What was that?

23 A. A high-speed wind-up turn.

24 Q. What is a high-speed wind-up turn?

25 A. It is a certification requirement to conduct a

1 high-speed wind-up turn so they can test the stick force  
2 gradients.

3 Q. I saw you going like this (indicating).

4 What does the plane actually look like in the sky  
5 when it is doing a high-speed wind-up turn?

6 A. It's going very fast in the sky at a high-angle of  
7 bank. It is doing a corkscrew through the sky, very fast.

8 Q. In passenger flights, is the pilot ever expected  
9 to do a high-speed corkscrew high in the sky?

10 A. No.

11 Q. Why not?

12 A. It would be very uncomfortable for the passengers.

13 Q. How so?

14 A. Pulling more than 1.3 Gs would feel like you are  
15 getting really pushed down into your seat. You may feel  
16 like you are getting pushed against the side of the  
17 aircraft. It would not be a comfortable maneuver.

18 Q. In all of your time flying, have you ever heard of  
19 a pilot doing a high-speed wind-up turn in a passenger  
20 flight?

21 A. No.

22 Q. You mentioned before that a high-speed wind-up  
23 turn is a certification maneuver.

24 What does that mean?

25 A. The certification regulations require that

1 particular maneuver to test for the stick force gradient.  
2 And so it is a flight test maneuver. It is not something  
3 that we would evaluate.

4 Q. Is the high-speed wind-up turn essentially done  
5 just to test the strength of the plane?

6 A. Yes.

7 Q. Based on this presentation, did you believe that  
8 MCAS could operate at any time at all outside this  
9 high-speed corkscrew turn?

10 A. No.

11 Q. So when did you believe MCAS would actually kick  
12 in during a passenger flight?

13 A. Never.

14 Q. After this presentation, did you have a chance to  
15 speak with Mr. Forkner about MCAS some more?

16 A. I did.

17 Q. How long after this presentation did you speak  
18 with Mr. Forkner?

19 A. Immediately following this -- completion of the  
20 presentation, we were chatting in the hallway.

21 Q. The hallway where?

22 A. At the -- at my office, the Seattle AEG.

23 Q. Was anyone else with you in this conversation with  
24 Mr. Forkner immediately after this presentation?

25 A. Yes. Christine Walsh.

1 Q. Christine Walsh, who is that?

2 A. She was the deputy -- the 737 deputy chief pilot  
3 for the flight test group.

4 Q. Was she in Mr. Forkner's group or a different  
5 group?

6 A. A different group.

7 Q. So when you, Ms. Walsh and Mr. Forkner were  
8 talking about MCAS, after this presentation, what was said?

9 A. She described exactly what a high-speed wind-up  
10 turn is for and what, as a flight test pilot, they would be  
11 looking for, technically, in the stick force gradients and  
12 why MCAS would be needed for that. And that a pilot would  
13 never see MCAS activate. It was outside of the normal  
14 operating range.

15 And those were -- we were discussing what kind of  
16 training would be required. I was concerned about that.

17 Q. Was Mr. Forkner participating in this  
18 conversation?

19 A. Yes.

20 Q. What was he doing?

21 A. He was standing next to Christine, nodding, fully  
22 engaged, as we talked through my concerns for MCAS.

23 Q. So during this conversation, did you get a new  
24 understanding or the same understanding about whether MCAS  
25 would operate outside this high-speed corkscrew turn?

1 A. It is the same understanding.

2 Q. About how long did this conversation last?

3 A. About five to seven minutes.

4 Q. Based on the presentation and this conversation,  
5 did you have any belief that MCAS would operate outside of  
6 what you were told?

7 A. No.

8 Q. And did you think that pilots needed to be trained  
9 about MCAS, given what you were told about it?

10 A. No.

11 Q. Why not?

12 A. In addition to the -- outside the normal operating  
13 envelope, it would be not a system that the pilots would be  
14 able to turn on and off, so they wouldn't be able to  
15 interact with it.

16 And that it would only operate under these  
17 conditions, and a pilot would never find themselves in these  
18 conditions, and so it wasn't something that we considered  
19 that we would have to train on.

20 Q. Did you have any other conversations with Mr.  
21 Forkner about MCAS after this point?

22 A. Yes.

23 Q. And what did he tell you about whether MCAS would  
24 kick in during a normal passenger flight?

25 A. That it would not -- a pilot would never see MCAS.

1 Q. And in these conversations, did he tell you  
2 anything about whether MCAS would kick in beyond this  
3 high-speed corkscrew turn?

4 A. No.

5 Q. And how did these explanations from Mr. Forkner to  
6 you come up?

7 A. They came up in a number of ways, both in meetings  
8 and then in the flight crew operating manual that they had  
9 proposed for concurrence, also had the same information as  
10 the 2015 presentation.

11 Q. Were the explanations that you did receive from  
12 Mr. Forkner about how MCAS worked important or unimportant  
13 about your understanding of MCAS?

14 A. They were important.

15 Q. Why is that?

16 A. It is the basis in which we use to determine  
17 whether or not we would evaluate the system for pilot  
18 training.

19 Q. Ms. Klein, did you continue talking with Mr.  
20 Forkner about MCAS into March of 2016?

21 A. Yes.

22 Q. I'm showing you what is in evidence at GX-13.

23 MR. ARMSTRONG: Ms. Holbrook, can you please blow  
24 up that portion of GX-13, please?

25 Thank you, ma'am.



1 BY MR. ARMSTRONG:

2 Q. Ma'am, who was this email from?

3 A. This is from Mark Forkner to Stacey Klein and Eric  
4 Perkins.

5 Q. And what is the date?

6 A. March 30th, 2016.

7 Q. And what is the subject?

8 A. MCAS lives in both FCCs.

9 Q. What is an FCC?

10 A. An FCC is a flight control computer. There are  
11 two on the MAX.

12 Q. What does that mean to you, MCAS lives in both  
13 FCCs?

14 A. It means that -- I had requested additional  
15 information on how MCAS was hosted on the aircraft.

16 Because it was required for a flight test  
17 compliant regulation, I was concerned that MCAS would  
18 operate all the time.

19 And so I had requested how is MCAS hosted on the  
20 aircraft.

21 Q. And this is the answer that you got back  
22 essentially from Mr. Forkner?

23 A. Yes.

24 MR. ARMSTRONG: Ms. Holbrook, if you can please  
25 highlight the first sentence?

1 BY MR. ARMSTRONG:

2 Q. It says, "Aaron, I confirmed with the flight  
3 controls engineers at MCAS does live in both FCCs and needs  
4 one to function."

5 Do you see that, ma'am?

6 A. Yes.

7 Q. So who did Mr. Forkner tell you that he confirmed  
8 with the operation of MCAS?

9 A. The Boeing flight control engineers.

10 Q. Do you know how many flight control engineers  
11 generally worked at Boeing on the MAX around this time?

12 A. I don't have an exact number, but they are  
13 responsible for developing the aircraft, so they have  
14 thousands of engineers.

15 Q. Why did you ask Mr. Forkner your question about  
16 how MCAS operated instead of tracking down every one of  
17 these thousands of flight control engineers at Boeing?

18 A. Because Mark is my direct counterpart part. He's  
19 the one that knows who and where to get that information  
20 from.

21 MR. ARMSTRONG: Ms. Holbrook, if you can please  
22 blow up -- I'm sorry -- please highlight the second  
23 sentence.

24 BY MR. ARMSTRONG:

25 Q. "So given that, are you okay with us removing all

1 references to MCAS from the FCOM training, as we discussed,  
2 as it is completely transparent to the flight crew and only  
3 operates way outside of the normal operating envelope?"

4 Do you see that, ma'am?

5 A. Yes.

6 Q. So what is Mr. Forkner asking you to do with  
7 respect to MCAS?

8 A. He's asking if it would be okay for them to remove  
9 all reference to MCAS from the flight crew operating manual  
10 and from the proposed training.

11 Q. What does that mean, the FCOM?

12 A. The FCOM is the flight crew operating manual.

13 Q. Is that FCOM helpful for pilots?

14 A. Yes.

15 Q. Why is that?

16 A. The FCOM is -- has all the system descriptions, it  
17 has checklists, it is like the manual for the aircraft so  
18 that pilots know how to interact with the aircraft.

19 Q. Mr. Forkner also asked you, "If you are okay with  
20 removing MCAS from the training," based on this email, what  
21 was he talking about?

22 A. So the training was in development for us to  
23 evaluate, and so they wanted to remove MCAS from the  
24 training proposal.

25 Q. Essentially, that iPad or computer-based training?

1 A. Yes, sir.

2 Q. So in this email Mr. Forkner is asking you to  
3 remove MCAS from what?

4 A. The FCOM and the training.

5 Q. And was it your decision or Mr. Forkner's?

6 A. It was my decision.

7 Q. Do you see where Mr. Forkner says, "As we  
8 discussed" --

9 A. Yes.

10 Q. Did you actually discuss with Mr. Forkner removing  
11 MCAS from the training and the FCOM?

12 A. Yes. He had requested that the MCAS get removed  
13 from the FCOM and the training. And so he was just  
14 confirming our question that we had asked for more  
15 information about how MCAS operated on the aircraft and was  
16 hosted on the aircraft.

17 Q. And based these discussions, did you believe that  
18 MCAS would operate at high speed or low speed?

19 A. High speed.

20 Q. And in these conversations, did Mr. Forkner tell  
21 you anything about whether MCAS would kick in outside of the  
22 high speed corkscrew turn?

23 A. No.

24 Q. Did Mr. Forkner give you any reasons for why he  
25 was asking you to remove MCAS from these documents in this

1 email?

2 A. He did.

3 Q. All right.

4 Where do you see that?

5 A. After the comma, the last part of the sentence.

6 Q. And can you read that to the jury?

7 A. Sure.

8 "As it is completely transparent to the flight  
9 crew and only operates way outside the normal operating  
10 envelope."

11 Q. What does that mean to you, "transparent to the  
12 flight crew"?

13 A. It means it's invisible, that the flight crew  
14 would not be aware of its operation or be able to turn it on  
15 and off.

16 Q. So, in this context, what would be invisible to  
17 the pilot at least at this time?

18 A. Yes.

19 Q. What would?

20 A. Oh, MCAS operation.

21 Q. And this was back in March of 2016, right?

22 A. Yes, sir.

23 Q. Now, just because something is transparent to the  
24 pilot, does that mean a pilot automatically needs zero  
25 training about it?

1           A.    No, there's plenty of systems that we still train  
2 on that are transparent to the pilot.

3           Q.    What was the second reason Mr. Forkner gave you  
4 back in March of 2016 to remove MCAS from the training  
5 documents?

6           A.    As it only operates way outside the normal  
7 operating envelope.

8           Q.    Mr. Forkner told you that MCAS should be removed  
9 because it operates way outside the normal operating  
10 envelope, what did you take him to mean?

11          A.    That he was referring to the high speed wind-up  
12 turn.

13          Q.    Did you believe that he was referring to anything  
14 else?

15          A.    No.

16          Q.    Why not?

17          A.    I didn't have any reason to believe otherwise.  
18 All the information that was provided was greater than .7  
19 Mach, flaps up, greater than 1.3 Gs, so...

20          Q.    Now, just because a system operates way outside  
21 the normal operating envelope, does that mean pilots don't  
22 need to get trained about it?

23          A.    No.

24          Q.    Why not?

25          A.    There is training that pilots have to receive,

1 full flight simulator training, they need to receive in  
2 order to learn how to recover the aircraft.

3 Q. Have you heard of something called "extended  
4 envelope training"?

5 A. Yes.

6 Q. What's that?

7 A. EET training is required for simulator training.  
8 It is where an aircraft would encounter, say, a thunderstorm  
9 and it would become upset, high-pitch angle or low-bank  
10 angle or, I'm sorry, high bank angle low pitch, and the  
11 pilot has to learn how to recover the aircraft safely.

12 Q. And you mentioned this, but pilots learn about  
13 extended envelope training where?

14 A. Repeat the question?

15 Q. Sure.

16 I think you mentioned this, but where do pilots  
17 get training about this extended envelope training?

18 A. Oh, EET training is required in a full flight  
19 simulator.

20 Q. And why does the AEG have extended envelope  
21 training?

22 A. Because there has been aircraft accidents resulted  
23 from upsets.

24 Q. Did you discuss with Mr. Forkner this extended  
25 envelope training?

1 A. Yes, we did.

2 Q. In what context?

3 A. It was a new regulation that the FAA had  
4 instituted, and the regulation was going to take effect  
5 prior to the certification of the MAX, and Mark was  
6 concerned that we would have to have a full flight simulator  
7 training requirement in order to accommodate that regulation  
8 for the MAX.

9 Q. So based on Mr. Forkner telling you that MCAS  
10 operates way outside the normal operating envelopes, what  
11 speed did you take him to mean?

12 A. High speed.

13 MR. ARMSTRONG: And, Ms. Holbrook, can you please  
14 pull that GX-12 in evidence?

15 And, Ms. Holbrook, if you can please blow up the  
16 top half of the document, please.

17 BY MR. ARMSTRONG:

18 Q. Ma'am, do you see this is an email from Mr.  
19 Forkner to a few other people?

20 A. Yes. This is from Mark Forkner to Scott Andersen  
21 and John Collier, cc'ing Ross Chamberlain, Mauricio Palacio,  
22 and Patrik Gustavsson.

23 Q. Is the date March 8, 2016?

24 A. Yes.

25 Q. Are you on this email?



1 A. No, I'm not.

2 Q. Did you see it during your evaluation of the MAX?

3 A. No, I did not.

4 MR. ARMSTRONG: And, Ms. Holbrook, if you can  
5 please blow up the -- through Level B. The first sentence  
6 and a half, please.

7 BY MR. ARMSTRONG:

8 Q. Ma'am, do you see that on the screen?

9 A. Excuse me, yes.

10 Q. What is Mr. Forkner describing as the biggest  
11 threat to Level B?

12 A. He says, "Here's the flight controls module  
13 updated with a thorough review by the flight controls  
14 engineers. This module, of course, is a big one for us.  
15 The material poses the greatest threat to Level B."

16 So I think -- let me just continue reading.

17 So I think he's talking about the flight controls,  
18 the different storyboard. Scott Anderson was the one that  
19 was developing the training for Boeing.

20 Q. The flight controls on the MAX?

21 A. Yes.

22 Q. What level of scrutiny did you give to changes to  
23 the flight controls on the MAX?

24 A. A high level of scrutiny.

25 Q. Why did you give a high level of scrutiny to the

1 changes in the flight controls on the MAX?

2 A. There were going to be two tests conducted to make  
3 sure that the flight controls were not -- did not pose a  
4 threat to the handling qualities of the aircraft.

5 And so it needed to be evaluated against the NG to  
6 ensure either that they felt the same, and if they didn't  
7 feel the same, then we would require a higher level of  
8 training.

9 Q. How important were the changes to the flight  
10 controls in the MAX in deciding whether Level B or a high  
11 level of training would be appropriate for the MAX?

12 A. There were many flight control changes and so they  
13 were -- it was a big deal to evaluate those.

14 Q. Okay.

15 MR. ARMSTRONG: Ms. Holbrook, if you can please  
16 take that down.

17 BY MR. ARMSTRONG:

18 Q. Back in 2016-2017, were there other people at the  
19 FAA working on the MAX?

20 A. Yes.

21 Q. Did those people include people in the aircraft  
22 certification office?

23 A. Yes. The Seattle aircraft certification office.

24 Q. Approximately how many people in the Seattle  
25 aircraft certification office worked on the MAX back in

1 2016, 2017?

2 A. Approximately, a team of 18 or 20.

3 Q. And did the aircraft certification office or the  
4 ACO evaluate the engineering design of the MAX?

5 A. Yes. The ACO's responsibility is to evaluate the  
6 engineering design for compliance with the certification,  
7 the airworthiness certification requirements for the  
8 airplane.

9 Q. Is the ACO or the airline certification office  
10 essentially just trying to make sure that the airplane is  
11 safe to fly from an engineering standpoint?

12 A. Yes. So they are responsible for the aircraft,  
13 that it is safe to fly, it won't fall apart in the middle of  
14 the sky. And we are responsible for evaluating the training  
15 associated with that aircraft.

16 Q. Was the ACO's function the same function or a  
17 different function compared to yours at the AEG?

18 A. It's a different function. They are finding  
19 compliance to totally different regulations.

20 Q. Can the ACO tell you, for example, the AEG, the  
21 level of training for the MAX?

22 A. No. They are not familiar with the training  
23 requirements that I have responsibility for oversight for.

24 Q. Nonetheless, did you reach out to your ACO  
25 colleagues to understand how MCAS worked around this time,

1 in early 2016?

2 A. I did.

3 Q. Why did you reach out to your colleague on the  
4 other side to understand how MCAS worked?

5 A. After my conversation with Mark and Christine in  
6 the hallway, I reached out to our flight controls engineer  
7 and are -- one of our flight test pilots to understand if  
8 that is how the system was designed and worked, to evaluate  
9 whether or not we would require some sort of training for  
10 that system.

11 Q. Did you confirm with the ACO whether MCAS operated  
12 outside the high-speed corkscrew turn?

13 A. Yes. It would only operate at a high-speed  
14 wind-up turn.

15 I needed to understand what stick force -- excuse  
16 me -- stick force gradient that they were testing for, so  
17 they understood under what conditions the aircraft would be  
18 flying when the system would actually activate.

19 Q. Did the ACO tell you when a pilot would expect to  
20 see MCAS kick in back in March 2016 or around then?

21 A. Can you repeat the question?

22 Q. Sure.

23 Did the ACO tell you when MCAS would be expected  
24 to kick in, back in March 2016?

25 A. Oh, yes. It would only kick in during the

1 high-speed wind-up turn outside of the normal operating  
2 envelope.

3 Q. What did you then decide at the time about the  
4 amount of training that pilots needed for MCAS based on the  
5 descriptions you received?

6 A. I had decided that we would not need to include  
7 training to evaluate that system.

8 Q. Based on explanations provided to you by who?

9 A. Both Mark Forkner and corroborating that  
10 information from my colleagues in the flight test group and  
11 the flight engineering group.

12 Q. Ms. Klein, in August 2016, did you make a  
13 provisional Level B decision for the MAX?

14 A. Yes.

15 Q. What does that mean "provisional Level B"?

16 A. So we had conducted the evaluation in July and  
17 August of 2016, and upon completion, had agreed that Level B  
18 would be an appropriate level of training.

19 But the aircraft had not been certified yet, so we  
20 gave a provisional Level B determination, pending no  
21 significant design changes.

22 Q. Pending what?

23 A. No significant design changes.

24 Q. Did you tell Mr. Forkner about your provisional  
25 Level B decision for the MAX?

1 A. Yes. I wrote a letter.

2 Q. Did you tell him that your provisional decision  
3 could change if were there any significant changes to the  
4 MAX?

5 A. Yes.

6 Q. And you mentioned you sent him this decision?

7 A. Yes. In a letter.

8 Q. All right. I'm showing you, ma'am, GX-18, which  
9 is in evidence.

10 MR. ARMSTRONG: Ms. Holbrook, if you can please  
11 blow up the top of the email please in GX-18.

12 BY MR. ARMSTRONG:

13 Q. Ma'am, do you recognize this email?

14 A. Yes.

15 Q. What is it?

16 A. It is an email from myself to Mark Forkner and  
17 Ross Chamberlain.

18 Q. And what is the date?

19 A. August 18th, 2016.

20 Q. And what do you write in this email?

21 A. "Ross, here is the signed letter for Gate 4  
22 acceptance."

23 Q. Why do you address this email to Ross?

24 A. Ross was kind of the administrator of the team,  
25 and so he had requested -- he was the gatekeeper of all of

1 the documentation.

2 Q. And you say, "Here is a signed letter."

3 What letter are you talking about?

4 A. The PCP Gate 4 Letter of Acceptance.

5 Q. Is that essentially your provisional Level B  
6 letter?

7 A. Yes.

8 Q. And did you actually attach the Level B letter to  
9 this email in GX-18 -- Government Exhibit 18?

10 A. Yes.

11 MR. ARMSTRONG: Ms. Holbrook, if you could please  
12 pull up page 2.

13 BY MR. ARMSTRONG:

14 Q. Ma'am, what is this letter?

15 A. This is the letter that outlines the provisional  
16 acceptance of Level B.

17 MR. ARMSTRONG: And, Ms. Holbrook, if you can  
18 please blow up the top half of this document, please.

19 BY MR. ARMSTRONG:

20 Q. What is the date of this letter?

21 A. August 17th, 2016.

22 Q. And who did you address it to?

23 A. Captain Stephen Taylor.

24 Q. Who is that?

25 A. He was the chief pilot of -- the director of the

1 flight training group that Mark worked for.

2 Q. Why were you sending this letter to Captain  
3 Taylor?

4 A. Captain Taylor was Mark's boss at the time.

5 Q. And was that the normal practice to send these  
6 kinds of letters to Mr. Forkner's boss?

7 A. Yes. We always sent it to the head of the  
8 department.

9 MR. ARMSTRONG: Could you please take this down,  
10 Ms. Holbrook?

11 BY MR. ARMSTRONG:

12 Q. Who signed this letter?

13 A. Myself.

14 MR. ARMSTRONG: Ms. Holbrook, if you can please  
15 pull up paragraph 2.

16 Ms. Holbrook, if you can please highlight  
17 through -- right there.

18 BY MR. ARMSTRONG:

19 Q. Ma'am, could you please read those first two  
20 sentences for the jury on GX-18?

21 A. Sure.

22 "Provisional approval of training course C. The  
23 Boeing course C is provisionally approved by the FSB."

24 Q. What is training course C?

25 A. As part of the pilot qualification plan to



1 evaluate the aircraft, there were several different courses  
2 that were going to be evaluated.

3 The first one that we evaluated was training  
4 course C, which was the differences training between the NG  
5 and the MAX.

6 Q. Okay. So how did y'all get to C?

7 A. That was a Boeing developed decision.

8 Q. What was your decision as to this training course?

9 A. B level training.

10 Q. And was this B level training for essentially the  
11 iPad or computer-based training?

12 A. Yes. It is in the previous paragraph, paragraph  
13 1.

14 Q. And was this decision final or something else?

15 A. No. Provisional is temporary, pending no  
16 significant design chance.

17 Q. And did you explain in this letter how your Level  
18 B iPad or computer-based training decision was temporary or  
19 provisional?

20 A. Yes. The next sentence identifies that it was a  
21 contingency.

22 MR. ARMSTRONG: And, Ms. Holbrook, if you can  
23 please highlight the sentence.

24 BY MR. ARMSTRONG:

25 Q. And, Ms. Klein, can you please read that sentence

1 for the Jury?

2 A. Sure.

3 "This approval is contingent upon no significant  
4 aircraft design changes being incorporated into the MAX  
5 prior to FAA Part 25 certification."

6 Q. What does that mean, "the approval is contingent  
7 upon no significant aircraft design changes"?

8 A. The aircraft was in the final stages, but  
9 sometimes design changes occur. And so I wanted to make  
10 sure that we would have the opportunity to evaluate any  
11 design changes by making it contingent.

12 So no significant design changes.

13 Q. So what is the impact of your provisional Level B  
14 training to be?

15 A. Any design change.

16 So in this case, the expansion of MCAS.

17 Q. Who did you trust to tell you about any  
18 significant design changes to the MAX after this  
19 August 17th, 2016 letter?

20 A. Mark Forkner.

21 Q. Why is that?

22 A. It was his job to inform me of design changes.

23 Q. Did you talk to with Mr. Forkner around this time?

24 A. Yes.

25 Q. In phone or in person?

1           A.    He was with us during the evaluation down in  
2 Miami, so in person.

3           Q.    How did Mr. Forkner react when you told him about  
4 this provisional Level B decision you made in August 2016?

5           A.    He was elated.

6           Q.    Why do you say he was elated?

7           A.    That we had determined that B level training to be  
8 sufficient on the MAX. He was excited.

9           Q.    How did you feel about the decision at the time,  
10 back in August 2016?

11          A.    At the time I was very confident.

12          Q.    Why were you confident?

13          A.    We -- I had put together a robust evaluation that  
14 included airline pilots, FAA pilots, and we put together a  
15 quantitative evaluation to evaluate those system  
16 differences, and so I was confident in our ability to  
17 complete that evaluation and that it was appropriate and  
18 sufficient. And so I was confident in that determination.

19          Q.    Had you a chance to actually fly the MAX around  
20 this time, August of 2016?

21          A.    Yes.

22          Q.    Around this time did anybody tell you that MCAS  
23 was expanded under low speed?

24          A.    No, they did not.

25          Q.    Did you ever think that Mr. Forkner wouldn't tell

1 you about changes to the MAX after August 2016?

2 A. No.

3 MR. ARMSTRONG: GX-21, please, Ms. Holbrook.

4 You can go to page 2, please, Ms. Holbrook.

5 If you can please blow up the top part, please,  
6 Ms. Holbrook.

7 BY MR. ARMSTRONG:

8 Q. Ma'am, do you see that this is a November 10, 2016  
9 email from Mr. Forkner to some other people in Boeing?

10 A. Yes.

11 Q. Did you have access to this email at the time of  
12 your evaluation?

13 A. No. This is an internal email.

14 Q. This document is March [sic] 10th, 2016.

15 About how many days before the shocker alert, I  
16 lied unknowingly to regulators' chat in this email?

17 A. Roughly, five days.

18 MR. ARMSTRONG: Ms. Holbrook, if you can please  
19 highlight the second paragraph.

20 Actually, I'm sorry. Can you please highlight  
21 this sentence?

22 BY MR. ARMSTRONG:

23 Q. Ma'am, do you see where Mr. Forkner writes, "This  
24 is what we sold to regulators who have already granted us  
25 the Level B differences determination"?

1 A. Yes.

2 Q. Who was the regulator working with Mr. Forkner in  
3 November 2016?

4 A. Myself.

5 Q. And who had granted Mr. Forkner the Level B  
6 differences determination at this time?

7 A. I had granted the provisional Level B.

8 Q. Did you view your role at the time as someone who  
9 had been sold on the changes on the MAX?

10 A. No.

11 Q. Is that how the evaluation of the MAX is supposed  
12 to work?

13 A. No.

14 Q. Why not?

15 A. It is based on mutual trust.

16 Q. Did Mr. Forkner tell you at the time that this is  
17 how he described your role to his Boeing colleagues?

18 A. No.

19 MR. ARMSTRONG: Ms. Holbrook, can you please  
20 highlight the last sentence?

21 BY MR. ARMSTRONG:

22 Q. "To go back to the now and tell them there is, in  
23 fact, a huge difference in how you must operate the MAX  
24 during an emergency descent would be a huge risk to that  
25 differences training determination?"

1 Do you see that, ma'am?

2 A. Yes.

3 Q. Did you know at the time, in November 2016, that  
4 Mr. Forkner expressed concerns his Boeing colleagues were  
5 not getting back to you, the regulator, about differences on  
6 the MAX?

7 A. No, I did not.

8 Q. Would that have been a concern to you?

9 A. Yes. Because I had raised the concern earlier in  
10 the development for the emergency descent spoiler alert. I  
11 was concerned about the training that we would have to  
12 evaluate.

13 Q. Is that how the evaluation is supposed to work,  
14 where differences are not brought to your attention?

15 A. No.

16 Q. All right. Ma'am, let's jump from August 2016 to  
17 November 2016.

18 Around this time, did you discuss simulator  
19 flights with Mr. Forkner?

20 A. Yes.

21 Q. What is a simulator flight?

22 A. The simulator is a full-flight simulator used to  
23 conduct pilot training.

24 Q. How does it work?

25 A. Safely.

1           It is a full replica of the flight deck of the  
2 aircraft, and it is either hydraulically or electrically  
3 moved to simulate the aircraft actually flying.

4           Q.    Is it pretty realistic?

5           A.    Yes, it is very realistic.

6           Q.    Did you learn that Mr. Forkner was planning to do  
7 a simulator flight on the MAX around November of 2016?

8           A.    Yes.

9           Q.    How did you learn that?

10          A.    He was -- he told me. He was headed to Montreal  
11 to do simulator fly-outs.

12          Q.    He said the simulator was where?

13          A.    In Montreal, Canada.

14          Q.    And did he say when he was going to do the  
15 simulator flights in Montreal?

16          A.    It was before Thanksgiving, so November of 2016.

17          Q.    What was your understanding of why Mr. Forkner was  
18 going to do simulator flights in the MAX up in Montreal?

19          A.    So Boeing was developing a simulator. It just  
20 wasn't going to be ready for certification at the time of  
21 the delivery of the first airplanes to the operators who  
22 were already flying the 737. The development was for those  
23 airlines that didn't already have a 737.

24                So he was headed to Montreal to evaluate that the  
25 simulator was just like the real airplane.

1 Q. Did he actually go?

2 A. Yes.

3 MR. ARMSTRONG: Ms. Holbrook, if you can please  
4 pull up GX-22.

5 Ms. Holbrook, if you can please pull up 6:50,  
6 please.

7 BY MR. ARMSTRONG:

8 Q. Ma'am, based on your experience, what is Mr.  
9 Forkner describing in the first two lines of this chat?

10 A. He's describing the activation of MCAS and that  
11 MCAS had been expanded down to Mach .2.

12 Q. And where did he experience this, based on this  
13 chat?

14 A. At the simulator.

15 Q. Is that what that means, in the sim?

16 A. Yes.

17 Q. Is that tech lingo?

18 A. Yes, we call the full-flight simulator the sim.

19 Q. After -- after November 15, 2016, the date of this  
20 chat, did you have a chance to sit down with Mr. Forkner and  
21 talk to him?

22 A. Yes. The following week we had a meeting.

23 Q. The following week, the week after this chat?

24 A. Yes.

25 Q. Where was this meeting?



1 A. It was at the Boeing Company.

2 Q. What was the purpose of this meeting, from your  
3 perspective?

4 A. We were discussing the Flight Standardization  
5 Board report.

6 Q. Was anybody else there?

7 A. Yes.

8 Q. Who else was there?

9 A. My colleagues and his colleagues.

10 Q. Did you ask them how did it go on the simulator up  
11 in Montreal?

12 A. Yes. I asked him how it went.

13 Q. What did he tell you?

14 A. And he said it went great, there were a few kinks  
15 to work out.

16 Q. What was that?

17 A. There were a few kinks to work out.

18 Q. During this meeting a week after this chat, did  
19 Mr. Forkner tell you anything about how MCAS is now active  
20 down to Mach .2?

21 A. No, he did not.

22 Q. Would this information have been important for you  
23 to know at the time for your evaluation?

24 A. Yes, it would have been.

25 Q. Why is that?

1           A.     Because we did not evaluate MCAS, so it would have  
2     been important so that we could.

3           MR. ARMSTRONG:   Ms. Holbrook, can you please pull  
4     down to the bottom to capture 6:51, please?

5     BY MR. ARMSTRONG:

6           Q.     Ms. Klein, a week after this chat, when you sat  
7     down with Mr. Forkner in a meeting, did he tell you how he  
8     said the week before, "I basically lied to the regulators  
9     unknowingly"?

10          A.     No, he did not.

11          Q.     Did he mention anything at all about that to you?

12          A.     No, he did not.

13          MR. ARMSTRONG:   Ms. Holbrook, if you please pull  
14     this down and go to page 2.

15                 And if you could please pull up 6:53.

16     BY MR. ARMSTRONG:

17          Q.     Ms. Klein, during this face-to-face meeting with  
18     Mr. Forkner, did he tell you anything about, surprise, why  
19     are we just reading about this now?

20          A.     No, he did not.

21          MR. ARMSTRONG:   Ms. Holbrook, if you can please  
22     pull up GX 22 next to GX-18, the provisional letter.

23     BY MR. ARMSTRONG:

24          Q.     So, Ms. Klein, in November 2016, did Mr. Forkner  
25     tell you that MCAS is now active down to Mach .2?

1 A. No, he did not.

2 Q. Was the fact that MCAS was active down to Mach .2  
3 a significant aircraft design change that you pointed out in  
4 your provisional Level B letter?

5 A. Yes, it is.

6 Q. Why is that?

7 A. Because the operation of MCAS, prior to the  
8 expansion, a pilot would not see it, and now, if it is able  
9 to activate down to Mach .2, a pilot would have the  
10 opportunity to interact with it, so we would need to  
11 evaluate that.

12 Q. Did you have a chance to?

13 A. No, I did not.

14 Q. Why not?

15 A. I didn't know the system had been expanded.

16 Q. Knowing that MCAS is now active down to Mach .2  
17 have affected your Level B decision in August of 2016?

18 A. Yes.

19 Q. Can you explain to the Jury why that is?

20 A. There are many maneuvers that that system would  
21 interact with that is required pilot training in a  
22 full-flight simulator.

23 And so, I did not have the opportunity to evaluate  
24 that.

25 Once we learned about the expansion of MCAS, we

1 did evaluate that and determined E level training would be  
2 appropriate.

3 Q. Was it also important for you to know about the  
4 low-speed expansion of MCAS down to Mach .2 because it could  
5 then kick in a passenger flight?

6 A. Yeah, it would now be available to kick in during  
7 the normal -- normal course of operation.

8 MR. ARMSTRONG: Ms. Holbrook, if you can please  
9 take that down.

10 BY MR. ARMSTRONG:

11 Q. How about how many months are there between  
12 November 2016 and the shocker alert chat and July 2017 when  
13 you set the final Level B decision?

14 A. About nine months.

15 Q. Did you and Mr. Forkner talk over this nine  
16 months?

17 A. Yes. Often.

18 Q. What did y'all talk about?

19 A. We were talking about the development and  
20 publication of the Flight Standardization Board's report.

21 Q. In that context, did you deal with Mr. Forkner  
22 directly about MCAS?

23 A. Yes, I did.

24 Q. How many times in those interactions did Mr.  
25 Forkner tell you MCAS is active down to Mach .2?

1 A. Never.

2 Q. What was he asking you to do instead with respect  
3 to MCAS in that FSB report you mentioned?

4 A. He was asking me to remove it.

5 Q. And you mentioned this term already, the FSB  
6 report.

7 A. Yes.

8 Q. Does the FSB report have the level of training for  
9 the MAX?

10 A. Yes.

11 Q. Who publishes the FSB report?

12 A. The Seattle AEG.

13 Q. And what was your role in writing it as the chair  
14 of the FSB?

15 A. I wrote it.

16 Q. Did you work with anyone else in this room about  
17 the contents of the FSB report?

18 A. Yes.

19 Q. Who?

20 A. Mark Forkner.

21 Q. Around when did you start working with Mr. Forkner  
22 on this FSB report for the MAX?

23 A. Immediately following the evaluation.

24 Q. And why were you working with Mr. Forkner as  
25 opposed to somebody else at Boeing?

1           A.     Because he was the -- my direct counterpart as the  
2 chief technical pilot.

3           Q.     Would the FSB report require U.S. airlines, like  
4 American and Southwest, to do anything on the MAX?

5           A.     Yes. They have to follow the training  
6 requirements in the FSB report.

7           Q.     So, for example, if the AEG says that this  
8 difference on the MAX requires Level B, what does the  
9 airline, like Southwest or American, have to do?

10          A.     They have to develop their training program to be  
11 at a minimum of Level B.

12          Q.     Can they say forget Level B, I want to do Level A?

13          A.     No.

14          Q.     Why not?

15          A.     Because it's against the regulation.

16          Q.     If you at AEG say simulator training is required  
17 for this difference, what does an airline have to do?

18          A.     They have to develop simulator training.

19          Q.     Around November 17th, 2016, did you send Mr.  
20 Forkner a draft of that FSB report?

21          A.     Yes, I did.

22          Q.     I'm showing you what in evidence, GX-24.

23                 MR. ARMSTRONG: Please, Ms. Holbrook.

24                 Ms. Holbrook, can you please blow up the bottom  
25 half of this email?

1 BY MR. ARMSTRONG:

2 Q. Ma'am, do you recognize this document?

3 A. Yes. It is an email I wrote.

4 Q. Who did you write this email to?

5 A. To Aaron Perkins, Chip Bosselmann, my two  
6 colleagues, Mark Forkner, Ross Chamberlain and Patrik  
7 Gustavsson at Boeing.

8 Q. What is the date of this email?

9 A. It is Thursday, November 17th, 2016.

10 Q. How many days after the shocker alert email, where  
11 Mr. Forkner described "lying unknowingly to the regulators,"  
12 is this email?

13 A. Two days.

14 Q. And, ma'am, if you can please read the first  
15 sentence.

16 A. "I've completed the FSB report."

17 Q. What are you talking about?

18 A. That I completed the draft Flight Standardization  
19 Board report that includes the evaluation of the MAX.

20 Q. And did you send this draft to Mr. Forkner and the  
21 other members of his team on November 17th, 2016?

22 A. Yes, I did.

23 Q. What did you want Mr. Forkner to do with it?

24 A. I wanted Mr. Forkner and his team to review it for  
25 accuracy.

1 Q. Why?

2 A. We always share our -- our FSB reports with the  
3 manufacturer, but also the template for the report was  
4 changing, and so I wanted to make sure that the information  
5 that was changed outside of the MAX was also accurate.

6 Q. Did you get a response back?

7 A. I did.

8 Q. About how long after you sent your draft did you  
9 get a response back?

10 A. A few days after this.

11 Q. All right.

12 MR. ARMSTRONG: Ms. Holbrook, if you can please  
13 take that down and please pull up the top half of this  
14 email.

15 BY MR. ARMSTRONG:

16 Q. Ms. Klein, do you recognize this is an email that  
17 Mr. Chamberlain sent to you on November 22nd, 2016?

18 A. Yes.

19 Q. And who is copied -- who is also copied on this  
20 email?

21 A. It is to myself and Aaron Perkins, Chip  
22 Bosselmann, and Mark Forkner and Patrik Gustavsson from  
23 Ross.

24 Q. Are Aaron Perkins and Dale Bosselmann part of the  
25 AEG as well?



1 A. Yes.

2 Q. And who else is on this email?

3 A. Mark Forkner, Patrik Gustavsson.

4 Q. What is the -- is this email just a follow-up of  
5 the draft that you sent on November 17th, the draft FSB  
6 report?

7 A. Yes. It's in response to that email with their  
8 comments attached.

9 Q. What does Mr. Chamberlain say to you in the first  
10 sentence of this email?

11 A. "Attached is the draft with our comments."

12 Q. What is he talking about?

13 A. I had sent the draft FSB report to them for them  
14 to review for accuracy, and they are replying with the draft  
15 attached with their comments.

16 Q. How many days after the shocker alert that Mr.  
17 Forkner was chatting with, with Mr. Gustavsson, did you get  
18 this draft back from Mr. Chamberlain?

19 A. A week.

20 Q. One week later?

21 A. Yes. One week.

22 Q. Let's take a look at what they sent you.

23 MR. ARMSTRONG: Ms. Holbrook, if you can please  
24 pull up page 28 of GX-24, Government Exhibit 24.

25 ///

1 BY MR. ARMSTRONG:

2 Q. Ma'am, do you recognize Government Exhibit 24, at  
3 page 28?

4 A. Yes. This is the difference table.

5 Q. What does that mean a "difference table"?

6 A. It identifies the NG to the MAX system differences  
7 and what level of training and checking is required for each  
8 of those differences.

9 Q. All right.

10 MR. ARMSTRONG: Ms. Holbrook, if you can please  
11 blow up that part of the differences table.

12 BY MR. ARMSTRONG:

13 Q. Ma'am, we see here on the differences table, we  
14 see flight controls and then -- one, two, three, four --  
15 five things next to it.

16 What does that mean?

17 A. Of this section, of the flight control systems,  
18 there were five systems that were included in this section.

19 Q. And are these new or changed systems on the MAX  
20 compared to the NG that pilots would be trained on if they  
21 were flying -- if they were included in here at the end of  
22 the day?

23 A. Yes, they are new or changed.

24 Q. And is MCAS on this list?

25 A. It is, yes.

1 Q. And is it the third bullet down?

2 A. Yes.

3 Q. Did you mean to put MCAS on this draft FSB report?

4 A. No. I had inadvertently added it to the  
5 difference table.

6 Q. And had you agreed with anyone at this point to  
7 remove MCAS from the differences table in the FSB report?

8 A. Yes. I had agreed with Mark Forkner.

9 MR. ARMSTRONG: Ms. Holbrook, if you can please  
10 take that down and if you can please blow up from there to  
11 there.

12 BY MR. ARMSTRONG:

13 Q. Ma'am, is there a line through MCAS in this draft  
14 FSB report that you received?

15 A. Yes.

16 Q. What did you take that line to mean when you got  
17 it at the time?

18 A. It's track changes, so it's a request to delete  
19 MCAS.

20 Q. And did you have any inclination as to who  
21 proposed the deletion of MCAS?

22 A. Yes. It is identified as Mark Forkner requesting  
23 that deletion.

24 Q. And where do you see that, ma'am?

25 A. In the comments to the right of the "MA 9"

1 comment.

2 MR. ARMSTRONG: And, Ms. Holbrook, if you can  
3 please take this down and blow up the comment by itself,  
4 please.

5 BY MR. ARMSTRONG:

6 Q. So, ma'am, who is "FMA" in this document?

7 A. That is Mark A. Forkner.

8 Q. And what change was he proposing to you?

9 A. He was asking -- he said, "We agreed to not  
10 difference MCAS since it is outside normal operating  
11 envelope."

12 Q. Since it is outside the normal operating envelope.  
13 Have we seen that language already today?

14 A. Yes. From the 2015 presentation.

15 Q. And also the March 2016 email?

16 A. Yes.

17 Q. Is it true at the time, back in November 2016,  
18 that you agreed not to reference MCAS with Mr. Forkner?

19 A. Yes.

20 Q. When did you make that agreement?

21 A. In 2016, based on the transparency and that it was  
22 outside the normal operating envelope.

23 Q. When you made that agreement, did you think that  
24 MCAS would operate at high speed or low speed?

25 A. High speed.

1 Q. When you made that agreement, did you think that  
2 MCAS would operate in passenger flight or as something else?

3 A. Just during a high-speed wind-up turn.

4 Q. That is the corkscrew maneuver?

5 A. Yes.

6 Q. And why did you have that understanding?

7 A. It is the only understanding that I had from the  
8 presentation and Mark Forkner's discussions.

9 Q. So if Mr. Forkner told you that MCAS is outside  
10 the normal operating envelope, did you take him to mean that  
11 high-speed corkscrew turn or something else?

12 A. No, the high-speed wind-up turn.

13 Q. Had you discussed with Mr. Forkner, around this  
14 time, MCAS operating in any other scenario?

15 A. No.

16 Q. Did you have any reason to believe at this time  
17 that MCAS actually would kick in during passenger flights?

18 A. No.

19 Q. Did you have any reason to believe at all during  
20 this time that MCAS operates at low speed?

21 A. No.

22 Q. Did Mr. Forkner tell you, in this document or his  
23 comments, that MCAS is now active down to Mach .2?

24 A. No. The agreement is outside the normal operating  
25 envelope, which is in reference to the 2016 discussion and

1 the 2015 PowerPoint.

2 Q. Would you have agreed to take MCAS out of this  
3 document if you knew at the time that MCAS was active down  
4 to Mach .2?

5 A. No, I would have needed to reevaluate the system.

6 Q. So at the time did you believe that your agreement  
7 was based on right or wrong information?

8 A. Wrong -- well, at the time I thought it was right  
9 information.

10 Q. What do you now know?

11 A. It was wrong information.

12 Q. Can you explain why?

13 A. This request is after Mark learned about the  
14 expansion of the MCAS down to Mach .2.

15 Q. So what is the significance to you that Mr.  
16 Forkner asked you to "delete MCAS, because, as we agreed, it  
17 is outside the normal operating envelope"?

18 A. That he lied.

19 Q. Who did he lie to?

20 A. Me.

21 Q. What did he lie about?

22 A. How MCAS operates.

23 Q. After this email, did you have another opportunity  
24 to discuss MCAS in the context of the FSB report with Mr.  
25 Forkner?

1 A. Yes. A couple of months later.

2 Q. I'm showing you what is in evidence GX-26.

3 Ma'am, are you familiar with this document?

4 A. Yes.

5 MR. ARMSTRONG: Ms. Holbrook, if you can please  
6 blow up the top.

7 BY MR. ARMSTRONG:

8 Q. What is this email?

9 A. This is an email from Mark to myself with a copy  
10 to Ross.

11 Q. What is the date?

12 A. January 17, 2017.

13 Q. And the subject?

14 A. "A few DT updates please."

15 Q. What does that mean?

16 A. He's requesting a few differences tables updates,  
17 please.

18 Q. The differences table, is that what we just looked  
19 at in Government Exhibit 24, flight controls, MCAS is  
20 crossed out?

21 A. Yes.

22 MR. ARMSTRONG: Ms. Holbrook, if you can please  
23 pull down the zoom to the "delete MCAS" portion.

24 BY MR. ARMSTRONG:

25 Q. Ma'am, what is Mr. Forkner's request of you about

1 MCAS in this document on January 17th, 2017?

2 A. He's requesting that I delete MCAS. He's  
3 referencing, recall we decided we weren't going to cover it  
4 in the FCOM or CBT since it's way outside the normal  
5 operating envelope.

6 MR. ARMSTRONG: Ms. Holbrook, can you please  
7 highlight "flight controls for the MCAS?"

8 BY MR. ARMSTRONG:

9 Q. Ms. Klein, about how many days after the shocker  
10 alert, that you saw before, did Mr. Forkner ask you to  
11 delete MCAS the second time in this FSB report?

12 A. Roughly, 60 days.

13 Q. Did Mr. Forkner give you a reason why he's asking  
14 you again for a second time to delete MCAS?

15 A. Yes. He said since it's way outside the normal  
16 operating envelope.

17 Q. Is it still your agreement with Mr. Forkner, on  
18 January 17th, 2017, to delete MCAS from the iPad training or  
19 the CBT?

20 A. Yes.

21 Q. And delete MCAS from the FSB report that we  
22 discussed before?

23 A. Yes.

24 Q. In January 2017, is that agreement based on MCAS's  
25 operating at high speed or low speed?



1 A. High speed.

2 Q. Is that agreement based on whether MCAS would kick  
3 in during passenger flight or is that the high-speed  
4 corkscrew turns?

5 A. Just the high-speed wind-up turn.

6 Q. In January 2017, 60 days after the shocker alert  
7 chat, did you have any reason to believe at all that MCAS  
8 would be active down to Mach .2?

9 A. No, I did not.

10 Q. Who did you trust to give you that information in  
11 January of 2017?

12 A. Mark Forkner.

13 Q. Would you still have decided in January 2017 to  
14 delete MCAS, if you knew at the time it was active down to  
15 Mach .2?

16 A. No. I would have had to reevaluate it.

17 Q. So what is the significance to you, when Mr.  
18 Forkner asked you to delete MCAS, it says, "Do you recall,  
19 we decided to delete it because it is way outside the normal  
20 operating envelope"?

21 A. That it's for a high-speed wind-up turn.

22 Q. Do you think he was telling you the truth?

23 A. I believe he was telling me the truth.

24 Q. What do you now know?

25 A. He was not.

1 MS. McFARLANE: Objection, your Honor,  
2 speculation.

3 THE COURT: Overruled.

4 BY MR. ARMSTRONG:

5 Q. What do you know now, ma'am?

6 A. He did not.

7 Q. Ma'am, did you actually evaluate, as the chair of  
8 the FSB, the low-speed expansion of MCAS after the  
9 January 2017?

10 A. Yes, I did.

11 Q. I'm sorry.

12 After January 2017, before July 2017?

13 A. Oh, no, I did not.

14 Q. Why not?

15 A. I didn't know about it.

16 Q. Because he didn't tell you?

17 A. Correct. Correct. He did not tell me.

18 Q. Who is "he"?

19 A. Mark Forkner.

20 MR. ARMSTRONG: GX-28, please, Ms. Holbrook,  
21 already in evidence.

22 Ms. Holbrook, can you please blow up the top half  
23 the email?

24 BY MR. ARMSTRONG:

25 Q. Ms. Klein, is this an email from Mr. Forkner on

1 July 7th, 2017, Re: FSB Report?

2 A. Yes, sir.

3 Q. Is that ballpark when you, as the chair of the  
4 FSB, published the final FSB report with Level B training  
5 for the MAX?

6 A. Yes, it is.

7 Q. This report writes, "Attached is the final and  
8 approved 737 FSB report, which adds the MAX. This is  
9 formally approving the MAX as the same type rating as the  
10 737 and Level B differences between the NG and the MAX."

11 Do you see that?

12 A. Yes.

13 Q. Is he talking about your report?

14 A. Yes.

15 Q. Have you had a chance to review the attachments to  
16 Government Exhibit 28?

17 A. Yes. The final report.

18 MR. ARMSTRONG: Please go to page 5, Ms. Holbrook.

19 BY MR. ARMSTRONG:

20 Q. What is the Jury looking at on page 5 of  
21 Government Exhibit 28?

22 A. This is the cover page of the Flight  
23 Standardization Board report, Revision 14, dated July 5th,  
24 2017. It is the Boeing 737 FSB report.

25 Q. And who approved it?

1 A. Seattle AEG.

2 Q. Is that you or somebody else?

3 A. That is me.

4 MR. ARMSTRONG: Page 23, please, Ms. Holbrook,  
5 Government Exhibit 28.

6 Ms. Holbrook, please blow up "Flight Controls."

7 BY MR. ARMSTRONG:

8 Q. Ma'am, is this the differences table for the MAX  
9 that you published in July 2017 about flight controls?

10 A. Yes. This is the differences table between the NG  
11 and the MAX.

12 Q. So we see here, "Spoilers, loads, lams, jams, MDS,  
13 EDS, something spoilers, and assist on"?

14 A. Yes. Speed breaks.

15 Q. Does it say anywhere on here MCAS?

16 A. No, sir.

17 Q. Why not?

18 A. I had removed it.

19 Q. Based on right or wrong information?

20 A. Wrong information.

21 Q. When you removed it from the final document, did  
22 you think that MCAS would operate at high speed or low  
23 speed?

24 A. High speed only.

25 Q. When you decided Level B for the MAX in July 2017,

1 what did airlines, like Southwest or American, have to train  
2 their pilots on?

3 A. What did they have to train their pilots on?

4 Q. Yes.

5 A. Ipad training CBT.

6 Q. Did the pilots have to do simulator training at  
7 all?

8 A. No, they did not.

9 Q. In July 2017, did any of these airlines have to  
10 shoulder the expenses you mentioned before associated with  
11 simulator training for MCAS?

12 A. No, they did not.

13 Q. Ms. Klein, last document.

14 MR. ARMSTRONG: GX-31, please, Ms. Holbrook.

15 BY MR. ARMSTRONG:

16 Q. At this time, did Mr. Forkner actually leave  
17 Boeing at some point and go somewhere else?

18 A. Yes, he did.

19 Q. Where did he go?

20 A. Southwest Airlines.

21 Q. How do you know he went there?

22 A. He told me.

23 Q. Around when did Mr. Forkner leave Boeing for  
24 Southwest Airlines?

25 A. I believe it was the summer of 2018.

1 MR. ARMSTRONG: Ms. Holbrook, if you can please  
2 blow up the email.

3 BY MR. ARMSTRONG:

4 Q. Ms. Klein, who is this email from?

5 A. It is from Mark Forkner.

6 Q. To who?

7 A. Bob Waltz.

8 Q. Are you included on this email?

9 A. No, I'm not.

10 Q. What is the date of this email?

11 A. The date is November 14th, 2018.

12 Q. How long after the incident you described in 2018,  
13 in October, was this email sent by Mr. Forkner?

14 A. Almost a year and a half.

15 Q. I'm sorry. How long after the October 2018  
16 incident?

17 A. Oh, the incident. That is two weeks.

18 Q. Two weeks later?

19 A. Yes. Two weeks later.

20 Q. And where was Mr. Forkner working at the time he  
21 sent this email two weeks after that October 2018 incident?

22 A. Mr. Forkner was a technical pilot for Southwest  
23 Airlines.

24 Q. What is the subject of this email?

25 A. AEG and MCAS.

1 MR. ARMSTRONG: Ms. Holbrook, can you please  
2 highlight the first sentence?

3 BY MR. ARMSTRONG:

4 Q. Ms. Klein, Mr. Forkner writes, weeks after that  
5 incident, "MCAS is not specifically trained as a difference  
6 because most pilots will never stall a 737."

7 Is that what he writes?

8 A. Yes.

9 Q. Ms. Klein, is that the reason why MCAS was not  
10 specifically trained for pilots at American and Southwest  
11 and other U.S.-based airlines?

12 A. No, it was not.

13 Q. Did your decision not to train these pilots about  
14 MCAS have anything to do with stalling an aircraft?

15 A. No. And, in fact, we have to train stalls in a  
16 full-flight simulator.

17 Q. What was the reason you, as the AEG, actually  
18 decided the pilots wouldn't need training on MCAS?

19 A. It was based on the operation being a high-speed,  
20 high-G maneuver for outside the normal operating envelope, a  
21 high-speed wind-up turn.

22 Q. How would you characterize what Mr. Forkner is  
23 saying in the first line of this email?

24 A. That it is false.

25 Q. You had a chance to read this email?

1 A. I've reviewed parts of it, yes.

2 Q. Can you please read it to yourself and let me know  
3 when you are done?

4 Ms. Klein, anywhere in this email does Mr. Forkner  
5 say, "I didn't know that MCAS had changed from high speed to  
6 low speed"?

7 A. No.

8 Q. Does it say anywhere, the engineers at Boeing just  
9 didn't tell me about the change?

10 A. No.

11 Q. Does it say anywhere in the documents that I got  
12 didn't bring MCAS's change to my attention?

13 A. No.

14 Q. Does it say anywhere, I didn't know at all the  
15 MCAS operates down to low speed?

16 THE COURT: The document speaks for itself.

17 MR. ARMSTRONG: Thank you, Judge.

18 Ms. Holbrook, if you can please highlight the last  
19 sentence.

20 BY MR. ARMSTRONG

21 Q. Ms. Klein, can you please read that to the Jury.

22 A. "Ultimately, it was agreed that the existing stall  
23 identification systems information in the NG Boeing FCOM,  
24 Volume 2, Section 9.20 was sufficient to cover how MCAS  
25 provides stall identification."



1 Q. Is the reason that you decided not to train U.S.  
2 pilots about MCAS because of the stall identification  
3 systems information?

4 A. No, it was not.

5 Q. Does the stall identification system have anything  
6 to do with your decision how to train MCAS?

7 A. No. That is not how MCAS was supposed to operate.

8 Q. Did you see here, Mr. Forkner says, "It was  
9 agreed" and then talks about the stall identification  
10 system, correct?

11 A. Yes.

12 Q. Did you have any agreement with Mr. Forkner at the  
13 time about not training pilots on MCAS because of the stall  
14 identification systems?

15 A. No.

16 Q. How would you characterize Mr. Forkner's  
17 explanation in this email?

18 A. False. It is a lie.

19 Q. Why do you say that?

20 A. The agreement had nothing to do with the stall  
21 identification system. It had to do with the operation  
22 being a high-speed wind-up turn only.

23 MR. ARMSTRONG: No further questions, your Honor.

24 MS. McFARLANE: If I may have a quick bathroom  
25 break.

1 THE COURT: In a few minutes.

2 MS. McFARLANE: Okay.

3 CROSS-EXAMINATION

4 BY MS. McFARLANE:

5 Q. Good afternoon, Ms. Klein.

6 A. Hi.

7 Q. My name is Ashlee McFarlane. I'm an attorney  
8 representing Mark Forkner.

9 On direct examination you talked about this being  
10 a very complicated process. You talked about the  
11 certification of this new airplane taking five years,  
12 correct, at least?

13 A. Yes.

14 Q. And you talked about there being many groups, many  
15 people involved in this process, isn't that right?

16 A. We all have our specialties, so -- and we are all  
17 responsible for certain areas of compliance with the Federal  
18 Aviation Regulations.

19 Q. So there are hundreds of people involved in  
20 certifying a new aircraft, isn't that correct, Ms. Klein?

21 A. No, that is not correct.

22 Q. How many people would you say are involved?

23 A. The -- the BASU has about 18 to 20, and then our  
24 team has five, including our resident specialist.

25 Q. And there were engineers at Boeing that were

1 involved in designing the airplane, isn't that right?

2 A. Yes, Boeing is responsible for designing their own  
3 airplane.

4 Q. So that was also involved in the certification  
5 process.

6 Boeing's engineers were also involved, isn't that  
7 correct, Ms. Klein?

8 A. Yes. Boeing engineers develop and design the  
9 aircraft.

10 Q. Thank you.

11 So there were many groups, you have got Boeing  
12 engineers, you have got test pilots at Boeing, you have got  
13 test pilots at the FAA, you have got, you said BASU, which  
14 is another group of engineers at the FAA?

15 A. I would like to make a clarification --

16 THE COURT: Hold on. Don't talk over each other.  
17 Wait for her to finish her question, and then she will wait  
18 for you to finish your answer.

19 THE WITNESS: Okay.

20 BY MS. McFARLANE:

21 Q. I was -- I was speaking, Ms. Klein, of the  
22 different groups of people that were involved. And then you  
23 have got the AEG group, your group at the FAA that is  
24 involved with training, and then you also mentioned an ACO  
25 group, which is the test pilots or other certification

1 groups at the FAA, isn't that correct?

2 A. The BASU is part of the ACO. It is all one group,  
3 and the BASU is responsible for the oversight of the Boeing  
4 engineers.

5 Q. The ACO is a subset of the BASU, is that correct?  
6 Or is the ACO over the BASU?

7 A. The BASU is the office responsible for finding  
8 compliance to the Boeing design of the aircraft.

9 Q. That wasn't my question, Ms. Klein.  
10 Is ACO group a subset of BASU?

11 A. No. The ACO is a branch in which the BASU is part  
12 of.

13 Q. Okay. So BASU is a subset of ACO, is that  
14 correct?

15 A. It is Boeing oversight office, yes.

16 Q. Thank you.

17 So with all of these people working together in  
18 this process, you get information from different sources.

19 You get information from test pilots about this  
20 plane, isn't that correct?

21 A. I get information from Mark Forkner, and I attend  
22 the same meetings as Mark Forkner.

23 Q. Ms. Klein, I need you to answer the question I  
24 have asked.

25 Ms. Klein, you get information about this plane

1 and you receive information about this plane, the MAX plane,  
2 from test pilots within the FAA and Boeing, isn't that  
3 correct?

4 A. Yes. We talk about the different designs.

5 Q. Thank you.

6 You also receive information, Ms. Klein, from the  
7 BASU group at the FAA about this plane, isn't that correct?

8 Yes?

9 A. Yes.

10 Q. And, Ms. Klein, you also receive information from  
11 others in the ACO group about the MAX plane, isn't that  
12 correct?

13 A. No. The ACO engineers work for the BASU.

14 Q. Have you never spoken to an ACO engineer, Ms.  
15 Klein?

16 A. Yes.

17 Q. Okay. And you receive information from those ACO  
18 engineers, correct, Ms. Klein?

19 A. Yes. They are part of the BASU group.

20 Q. Thank you.

21 A. They are resources for the group.

22 Q. And you receive this information from these  
23 various different people and different groups through  
24 meetings you attend, isn't that correct?

25 A. Yes.

1 Q. Presentations that are given, isn't that correct?

2 A. Yes.

3 Q. Phone calls that you have with these different  
4 people, isn't that correct?

5 A. Yes.

6 Q. Emails that you correspond with all of these  
7 different subsets of people, isn't that correct?

8 A. Yes.

9 Q. And all of this information that you receive from  
10 all of these different subsets of people inform you on doing  
11 your job in the AEG, isn't that correct?

12 A. Yes. It helps inform the conversations that Mark  
13 and I would have.

14 Q. It helps inform you to do your job, isn't that  
15 correct, Ms. Klein?

16 A. Portions of it help inform the process, certainly,  
17 yes.

18 Q. It helps to inform you in order to do your job  
19 with the AEG, isn't that correct, Ms. Klein?

20 A. It is not the sole --

21 Q. I did not say that, Ms. Klein. It is going to be  
22 very important that you listen to my question and respond to  
23 that.

24 A. Well, sometimes there are complexities with that.

25 Q. I understand. We will talk about those

1 complexities.

2 A. Okay.

3 Q. So we have mentioned the meetings and the  
4 presentations and the calls and the emails, and let's talk  
5 about one of those presentations in which you attended and  
6 received.

7 I'm going to show you what has been marked as  
8 Defense Exhibit Number 35A.

9 MS. McFARLANE: May I approach, your Honor?

10 THE COURT: Yes.

11 BY MS. McFARLANE:

12 Q. Ms. Klein, you are looking at a document we  
13 received from the Government through Boeing. It is one of  
14 Boeing's documents.

15 Do you recognize this document?

16 A. There were many different --

17 Q. Ms. Klein, do you recognize this document?

18 THE COURT: Do you recognize it?

19 THE WITNESS: Can I have some time to review it?

20 MS. McFARLANE: You sure can.

21 THE WITNESS: Thank you.

22 BY MS. McFARLANE:

23 Q. Are you ready, Ms. Klein?

24 A. Not quite yet.

25 Okay. Yes, I'm ready.

1 Q. Okay. The first page of this document is a --  
2 THE COURT: Hold on a second. Do you recognize  
3 the document?

4 THE WITNESS: Oh, yes. I do recognize the  
5 document. Thank you.

6 BY MS. McFARLANE:

7 Q. Okay.  
8 And this document is a presentation that Boeing  
9 gave that you attended about the 737 MAX plane?

10 MS. McFARLANE: Your Honor, the defense would  
11 offer Defendant's Exhibit 35A as an official business  
12 record.

13 MR. ARMSTRONG: No objection.

14 THE COURT: Defense Exhibit 35A will be admitted.

15 (The referred-to document was admitted in Evidence  
16 as Defense Exhibit 35A.)

17 MS. McFARLANE: Thank you, your Honor.

18 Can we please publish the first page?

19 And let's zoom in on that.

20 BY MS. McFARLANE:

21 Q. This, Ms. Klein, is a presentation that was given  
22 by Christine Walsh, who is a test pilot at Boeing, and Derek  
23 Pratt, who is an engineer, about the MAX handling qualities  
24 and you attended this presentation, correct?

25 A. I don't recall attending this particular



1 presentation in 2014. But if my name was on there, then,  
2 yes, I recognize the presentation.

3 Q. Would you like a document to help refresh your  
4 recollection?

5 A. Sure. Yes, that would be great.

6 MS. McFARLANE: May I approach, your Honor?

7 THE WITNESS: Thank you.

8 BY MS. McFARLANE:

9 Q. Ms. Klein, do you now recall whether you attended  
10 this presentation?

11 A. Yes, thank you.

12 Q. And did you attend?

13 A. Yes.

14 Q. And if you look on the first page of this, it  
15 says -- it's the dated May 22nd, 2014, is that correct?

16 A. Yes.

17 Q. Okay. And this presentation, as I said, was given  
18 by Christine Walsh and Derek Pratt. And if we could turn to  
19 page 30 of this presentation, it talks about MCAS.

20 A. Uh-huh.

21 Q. And it says that MCAS is operational outside of  
22 the normal operating envelope, high angles of attack only  
23 above 1.3 Gs, and it gives that Mach number range of .7 to  
24 .8.

25 So, Ms. Klein, when you testified on direct that

1 you learned about MCAS in 2015, that wasn't accurate, was  
2 it?

3 A. I guess it was 2014, that is more accurate.

4 Q. Did you forget about this presentation?

5 A. I had until you reminded me.

6 Q. Okay.

7 So it is accurate that you learned from Christine  
8 Walsh and Derek Pratt about MCAS in 2014, is that correct?

9 A. Yes. But this is the same slide from 2015 as  
10 well.

11 Q. That's correct.

12 MS. McFARLANE: All right. We can take that down.

13 BY MS. McFARLANE:

14 Q. And this presentation, Ms. Klein, was given by  
15 engineers and a test pilot, not by Mark Forkner, isn't that  
16 correct?

17 A. Yes, that's correct.

18 Q. And in 2014, when this presentation was given,  
19 Mark Forkner said nothing about MCAS, isn't that correct?

20 A. I don't know.

21 Q. You don't recall him telling you anything about  
22 MCAS at that time, isn't that correct?

23 A. Well, we talked about all kinds of changes to the  
24 aircraft.

25 Q. Ms. Klein, do you recall, in May of 2014, during

1 this presentation that you just remembered you had, that  
2 Mark Forkner did not speak to you about MCAS?

3 Do you recall whether you he spoke to you or not?

4 A. I do not remember that, no.

5 Q. Okay.

6 Now, these kinds of presentations were given all  
7 the time by others, besides Mark Forkner, to you and your  
8 group, isn't that correct?

9 A. Yes.

10 Q. And they were talking about details and  
11 specifications about this new plane, isn't that correct?

12 A. Yes.

13 Q. And they were telling you, the AEG, this  
14 information so that you can then do your job with the  
15 training component, isn't that correct?

16 A. Yes. It was so that Mark and I could --

17 Q. Thank you.

18 A. -- discuss what those changes are.

19 Q. And in order -- I want to recall something you  
20 said on direct.

21 You said that you relied and you trusted Mark  
22 Forkner to give you details and differences and provide  
23 information to you, is that correct?

24 A. Yes.

25 Q. And you were to rely on him to provide information

1 to you that he knew, isn't that correct?

2 A. Yes.

3 Q. Because how could he provide information to you if  
4 he did not know it, isn't that correct?

5 A. Correct.

6 Q. Okay. And you would agree with me that the way  
7 that all of these groups were set up at Boeing, that  
8 oftentimes Mark Forkner was left out of the loop of  
9 information, isn't that right?

10 A. I would not agree with that.

11 Q. You would not agree with that?

12 A. No.

13 Q. Okay.

14 A. I don't know is what I'm saying. I don't know if  
15 he was left out.

16 Q. You don't know if he was left out of the loop on  
17 occasion?

18 A. Occasionally, it -- it appeared that I had more  
19 information than him.

20 Q. Occasionally, it appeared you had more information  
21 about the MAX plane than Mark Forkner did, isn't that right?

22 A. Yes. So what I'm saying is, I don't know if he  
23 was left out.

24 Q. Let me just make sure I understand, Ms. Klein.

25 A. Sure.

1 Q. I don't want to speak over you.

2 There were occasions in which you knew information  
3 and details about the plane that Mark Forkner did not know,  
4 isn't that correct?

5 A. Yes. There were occasions --

6 Q. I'm sorry.

7 MR. ARMSTRONG: Objection, your Honor. Let Ms.  
8 Klein finish the question.

9 THE COURT: I think she has answered the question,  
10 that there were times when she knew more information than  
11 Mr. Forkner. So that is the answer.

12 Ask your next question.

13 MR. ARMSTRONG: Thank you, Judge.

14 BY MS. McFARLANE:

15 Q. And you knew there were occasions in which you  
16 knew more than Mark Forkner because you would tell Mark  
17 Forkner information about this plane and he had no idea,  
18 isn't that correct?

19 A. He would say he didn't have any idea.

20 Q. He would tell you he had no idea, correct?

21 A. Correct.

22 Q. And then you even told others that you -- there  
23 were countless times, numerous times, in which you told Mark  
24 Forkner information about this plane and he had no idea.

25 Didn't you say that, Ms. Klein?

1 A. Yes, I did.

2 Q. Okay. And when you were talking -- when you said  
3 that, you were talking with other people at the FAA, isn't  
4 that correct? Some of your colleagues?

5 A. Yes.

6 Q. And so you didn't work at Boeing, isn't that  
7 correct?

8 A. Correct. I did not work at Boeing.

9 Q. You worked at the FAA?

10 A. Yes.

11 Q. And so you received information from someone else  
12 other than Mark Forkner about the MAX plane?

13 A. I would attend the meetings --

14 Q. -- isn't that --

15 A. -- Boeing would hold.

16 Q. I'm sorry. Let me reask that.

17 And so, Ms. Klein, you would receive information  
18 from others, other than Mark Forkner, about the MAX plane,  
19 isn't that correct?

20 A. Yes.

21 Q. And so when you said you only received information  
22 from Mark Forkner, that was not completely accurate?

23 A. Well, it is Mark's responsibility to notify me of  
24 all of the design changes.

25 Q. Okay.

1 MS. McFARLANE: Your Honor, I actually do need  
2 that break.

3 THE COURT: All right.

4 Let's go ahead and take about a 10-minute break.

5 THE COURT SECURITY OFFICER: All rise.

6 (The jurors exited the courtroom.)

7 THE COURT: Okay. Please be seated.

8 All right.

9 (Recess)

10 (The jurors entered the courtroom.)

11 THE COURT SECURITY OFFICER: All rise.

12 False alarm.

13 All rise.

14 THE COURT: Please be seated.

15 BY MS. McFARLANE:

16 Q. Ms. Klein, before the break we were talking about  
17 Mark Forkner being out of the loop on occasions and you  
18 would inform him of changes to the aircraft on occasion.

19 I want to talk about what that loop is supposed to  
20 look like, right? The flow of information, right?

21 Engineers at Boeing design the airplane, they get  
22 that information to the flight test group and then to Mark  
23 Forkner, isn't that correct?

24 A. I don't know what the loop is at Boeing.

25 Q. You don't know what the chain of information is at

1 Boeing?

2 A. No.

3 Q. And you've never said that information that  
4 Forkner would have been required to share you should have  
5 come directly from flight test engineers? You never said  
6 that?

7 A. I don't recall that, no.

8 Q. Do you recall interviewing with the Government  
9 investigators and prosecutors in September 11, 2019?

10 A. I interviewed with a lot of investigators. Can  
11 you refresh my memory? Do you have a document?

12 Q. I absolutely can. One second.

13 MS. McFARLANE: May I approach the witness, your  
14 Honor?

15 THE COURT: Yes.

16 BY MS. McFARLANE:

17 Q. Ms. Klein, does this refresh your recollection of  
18 whether you met with the Government agents and prosecutors  
19 on September 11th, 2019?

20 A. Yes. I don't understand. What is this document?

21 Q. The document is just to refresh your recollection.  
22 Does it do so?

23 A. I didn't write this document.

24 Q. I didn't ask you that.

25 Does this document refresh your recollection on



1 whether you met with the Government on September 11th, 2019?

2 A. I met with the Government on September 11th, 2019.

3 Q. Okay. Thank you.

4 If you can turn to page 41 of this document -- I'm  
5 sorry -- page 7, the paragraph is listed as No. 41 in red.

6 A. Okay.

7 Q. If you can read that to yourself, not aloud.

8 Please let me know when you're done.

9 A. I'm done.

10 Q. Okay.

11 Now, isn't it true that on September 11th, 2019,  
12 you told the Government investigators and prosecutors that  
13 information Forkner was required to share with you should  
14 have come directly from flight tests through engineers?

15 A. I don't recall stating those words.

16 Q. You don't recall stating those words?

17 A. No.

18 Q. Okay. So this document does not accurately  
19 reflect your statements?

20 MR. ARMSTRONG: Objection, your Honor.

21 THE COURT: Sustained.

22 BY MS. McFARLANE:

23 Q. But, Ms. Klein, you do know that Mark Forkner had  
24 to go and consult with engineers about information to  
25 provide to you, isn't that correct?

1 A. Yes.

2 Q. Okay.

3 Mr. Forkner did not design the airplane, isn't  
4 that right?

5 A. That's correct.

6 Q. And Mr. Forkner is not an engineer, correct?

7 A. Not that I'm aware of, no.

8 Q. On direct examination -- I can take that back if  
9 you -- or just set it down. We don't need to look at  
10 anymore. Thank you.

11 On direction examination, we talked about -- you  
12 talked about Level B and this computer-based training level,  
13 isn't that right?

14 A. Yes.

15 Q. And the AEG or yourself, you are the one that  
16 would determine whether this new plane would qualify for  
17 Level B training, isn't that correct?

18 A. Yes.

19 Q. Okay.

20 And Boeing management and others higher than Mark  
21 Forkner sort of set this goal for Level B for the MAX, isn't  
22 that correct?

23 A. Yes.

24 Q. And, in fact, it's not unusual for a plane  
25 manufacturer like Boeing to request Level B training, isn't

1 that correct?

2 A. Can you repeat the question?

3 Q. Sure.

4 It's not unusual, Ms. Klein, for an OEM or a plane  
5 manufacturer like Boeing to request Level B training from  
6 your group, isn't that correct?

7 A. No, that's not unusual.

8 Q. It is not unusual?

9 A. No.

10 Q. And, in fact, FAA guidance and regulations  
11 encourage manufacturers to make as few differences between  
12 models as possible, because it's safer, isn't that true?

13 A. What are you referring to? What regulation are  
14 you referring to?

15 Q. Are you familiar with the AC 120-53B?

16 A. Yes. I'm very familiar.

17 Q. Okay.

18 And wouldn't you say that's sort of like the rule  
19 book for FSB evaluations and evaluating differences in  
20 airplanes?

21 A. It's the guidance to the manufacturers on how to  
22 evaluate the differences.

23 Q. And as you mentioned, you're very familiar with  
24 that regulation, correct?

25 A. It's not a regulation.

1 Q. Or how would you phrase it?

2 A. It's an advisory circular, it's guidance to the  
3 manufacturer.

4 Q. Guidance.

5 A. Yes.

6 Q. So you're very familiar with that guidance?

7 A. Yes.

8 Q. And you're familiar then that that guidance says,  
9 "It is intended to enhance safety by encouraging  
10 manufacturers to design with the goal of developing common  
11 characteristics between related aircraft," isn't that right?

12 A. Yes.

13 Q. Okay.

14 And so common characteristics between aircraft  
15 designs would result in a Level B training, isn't that  
16 right?

17 A. It depends on the differences.

18 Q. Well, fewer differences gets lower level of  
19 training, isn't that correct?

20 A. It depends on those differences, ma'am.

21 Q. You're right.

22 If there is one very big change, that might --  
23 that might require higher level -- sorry, higher level of  
24 training, isn't that correct?

25 A. It depends on the difference, the system

1 difference.

2 Q. Okay. But commonalities between the planes makes  
3 the plane safer, isn't that correct? To fly?

4 A. Commonalities can decrease the amount of training,  
5 yes.

6 Q. Okay.

7 Now, on direct examination, you talked about a  
8 meeting in the spring of 2015, after the presentation by  
9 Ms. Christine Walsh. Do you remember testifying to that?

10 A. Yes. Derek was the presenter, but Christine was  
11 who I talked with, with Mark, in the hallway, yes.

12 Q. So Derek Pratt, one of the engineers was the  
13 presenter, but after that meeting, you remember speaking  
14 with Christine Walsh, correct?

15 A. Yes. Yes.

16 Q. Okay.

17 And during that meeting, Christine Walsh is who  
18 told you that the parameters of MCAS were wind-up turns,  
19 isn't that correct?

20 A. Yes.

21 Q. Mark -- is that correct? I'm sorry, I don't want  
22 to speak over you.

23 A. Yes.

24 Q. Mark Forkner did not tell you that, is that  
25 correct?

1 A. No. It was Christine Walsh.

2 Q. Okay.

3 MS. McFARLANE: I would like to pull that  
4 Government Exhibit 13, please. If I can call that out so  
5 that we can see it clearer, please, Mr. Payton.

6 BY MS. McFARLANE:

7 Q. Ms. Klein, you recalled discussing this email on  
8 direct examination with the Government, isn't that  
9 corrected?

10 A. Yes.

11 Q. And this is from Mark Forkner to yourself and  
12 others regarding whether MCAS lives in both FCCs, correct?

13 A. Yes.

14 Q. And he asked if you were okay with us removing all  
15 reference to MCAS. He's talking about Boeing, isn't that  
16 correct?

17 A. Yes.

18 Q. All right. From the FCOM?

19 A. Yes, and the training.

20 Q. And he needed your permission before that is done,  
21 isn't that correct?

22 A. Yes. It was an agreement that we would make.

23 Q. Okay. And he says, "As we discussed, it's  
24 completely transparent to the flight crew and only operates  
25 way outside the normal operating envelope."

1                   And on direct you said, "Transparent means  
2 invisible, not able to turn on or off," isn't that correct?

3           A.    Yes.

4           Q.    And MCAS would have been invisible, not able to  
5 turn on and off whether it was down to .2 or .7, isn't that  
6 correct?

7           A.    The way that it was described to me as a  
8 high-speed wind-up turn, yes, but the expanded way, we would  
9 have a way to turn it off, ma'am.

10          Q.    Again, Ms. Klein, I didn't ask you about the  
11 expanded way.

12          A.    Okay.

13          Q.    MCAS, if the only that thing that changed was the  
14 speed was down to .2 instead of .7, it still would have been  
15 invisible to the pilot, isn't that correct?

16          A.    I don't know how to answer that question because  
17 it's more complex than that. It's not -- it's not -- no.  
18 That's not true.

19          Q.    Okay.

20                   So are you saying, Ms. Klein, that the expanded  
21 MCAS with the different speed range was no longer  
22 transparent to the pilot?

23          A.    That's correct.

24          Q.    Okay.

25                   And that's what you believed at that time and

1 that's what you believe today, that expanded MCAS was not  
2 transparent?

3 A. At the time, MCAS was transparent due to how it  
4 was operating.

5 So maybe you could repeat the question. I'm not  
6 following your question, ma'am. I'm sorry.

7 Q. Okay. So at the time when Mr. Forkner wrote this  
8 email to you and he said it was completely transparent to  
9 the flight crew, was that true, at this time?

10 A. Yes.

11 Q. Okay.

12 And he says, "It only operates way outside the  
13 normal operating envelope," and on direct you said, "The  
14 normal operating envelope was sort of a gate-to-gate  
15 flight," right? Takeoff, cruising, landing, correct?

16 A. Yes.

17 Q. All right.

18 And it's outside of the normal operating envelope  
19 because your understanding, a wind-up turn is not something  
20 you would experience in a normal flight from Dallas to  
21 Houston, correct?

22 A. Correct.

23 Q. And one of the components of MCAS was also that it  
24 was a high angle of attack, correct?

25 A. At a high speed greater than 1.3 Gs, correct.



1 Q. Right.

2 That was the version that you understood it to be,  
3 correct?

4 A. Correct.

5 Q. But even under the expanded version, it still  
6 required a high angle of attack, correct?

7 A. Yes.

8 Q. Okay. And a high angle of attack is something  
9 that most of us who are not pilots would refer to as a stall  
10 of some sort, or an approach to stall, right?

11 A. That's a required training maneuver, ma'am.

12 Q. That is not my question.

13 A high angle of attack is something that you could  
14 describe as a stall or an approach to stall, isn't that  
15 correct?

16 A. It could be depending on what the high angle of  
17 attack parameters were.

18 Q. Okay.

19 And so a stall or a high angle of attack, when a  
20 plane is like this, right? Is that right?

21 A. Uh-huh.

22 THE COURT: Is that yes?

23 THE WITNESS: Yes.

24 BY MS. MCFARLANE:

25 Q. Okay. So the reporter gets down sort of my hands

1 are up in the air, but that's not something that any of us  
2 would experience flying from Houston to Dallas typically,  
3 isn't that correct? That's not a normal operating envelope,  
4 isn't that correct?

5 A. It's important that I clarify the reason the  
6 expansion to .2 at a high angle of attack is important --

7 THE COURT: I think she just asking, though, in  
8 terms of her question, a normal operating envelope with a  
9 plane angled at the high stage?

10 MS. McFARLANE: That's correct, your Honor.  
11 That's absolutely correct.

12 THE WITNESS: Yeah, so you could still experience  
13 a high angle of attack during takeoff and landing.

14 BY MS. McFARLANE:

15 Q. Would that be the normal operating envelope --

16 A. Yes.

17 Q. -- to experience a high angle of attack, because  
18 the way you described normal operating envelope was just a  
19 normal flight, takeoff, cruise, and landing.

20 A. Yes, during rotation increasing the angle of  
21 attack and rotation when you land, you can experience a  
22 higher angle of attack, where it could have.

23 Q. So, Ms. Klein, it is your testimony that a high  
24 angle of attack is within the normal operating envelope of a  
25 flight?

1 A. It's more complex than that.

2 Q. It's more complex than that.

3 A. Yes.

4 Q. Okay.

5 Did you represent, even after you learned, or  
6 didn't you represent, even after you learned about the  
7 expansion of MCAS down to low speed, that it was still  
8 transparent and outside the normal operating envelope?

9 A. I don't recall what you're referring to.

10 Q. Didn't you tell that to the FAA and others that  
11 even after you learned MCAS was down to low speed, it was  
12 still transparent and outside the normal operating envelope?

13 A. Can you show me what you're referring to?

14 Q. Do you recall that?

15 THE COURT: Well, the question, first, is, do you  
16 ever recall saying that.

17 THE WITNESS: Yeah, as we were gathering  
18 information and learning about the expansion of MCAS.

19 BY MS. MCFARLANE:

20 Q. Ms. Klein, I'm sorry, I really don't want to  
21 interrupt. But do you recall saying that -- yes or no?

22 A. I don't recall exactly that. If you could show me  
23 something that references what you're talking about, that  
24 would be helpful.

25 Q. Sure.

1           A.    I don't understand the context in what your  
2 question is in regards to.

3           MS. McFARLANE:   May I have Exhibit 187, please?

4           Here you go.

5           May I approach, your Honor?

6 BY MS. McFARLANE:

7           Q.    If you could take a look at that, Ms. Klein.

8           Okay.

9           And specifically if you can turn to the second  
10 page, where it says, "From a training perspective," and read  
11 that paragraph. That may refresh your recollection.

12          A.    From a training --

13          Q.    No, no, no.

14          THE COURT:   Just to yourself.

15          THE WITNESS:   Sorry. My apologies.

16 BY MS. McFARLANE:

17          Q.    Okay. Ms. Klein, are you ready?

18          A.    Yes.

19          Q.    Okay.

20                Does this document refresh your recollection on  
21 whether after you learned about the expansion of MCAS that  
22 you still represented that it was transparent and outside  
23 the normal operating envelope?

24                Yes or no, Ms. Klein?

25          A.    It is transparent -- yes. But in context --

1 THE COURT: Well, hold on.

2 She's answered your question. If they have any  
3 concerns about how complete your answer is, they will be  
4 able to ask you further questions. But let's just answer  
5 counsel's questions here. So she answered that.

6 MS. McFARLANE: Thank you, your Honor. I will  
7 move on.

8 BY MR. ARMSTRONG:

9 Q. Ms. Klein, on direct, we talked about the three  
10 documents in which -- sorry -- on direct the Government  
11 talked with you about the three documents, the three emails  
12 in which Mark Forkner said that MCAS was outside the normal  
13 operating envelope.

14 Do you recall those documents?

15 A. Yes.

16 MS. McFARLANE: And just for the record, it's  
17 Government Exhibit 13, 24, and 26.

18 BY MS. McFARLANE:

19 Q. And each time Mark Forkner represented it was  
20 outside the normal operating envelope, correct?

21 A. Correct.

22 Q. Okay.

23 Mark Forkner never in any of those emails said  
24 it's only limited to wind-up turns, correct?

25 A. Correct. That language is not used.

1 Q. And on direct you said, "Well, I had a  
2 conversation with Mark Forkner where he said it was wind-up  
3 turns and high speed," correct?

4 A. Yes.

5 Q. But you spoke to the Government prior to today on  
6 at least nine different occasions.

7 A. Yes.

8 Q. September 11th, 2019, September 13, 2019,  
9 December 4, 2019, October 22nd, 2019, April 1st, 2020,  
10 December 2nd, 2020, January 13, 2021, February 14th, 2022.

11 And then lastly, as far as I know, March 8th,  
12 2022, which was just a few weeks ago, isn't that correct?

13 A. Yes.

14 Q. And March 8th, 2022, is the first time you've ever  
15 said that Mark Forkner discussed with you wind-up turns and  
16 high speed, isn't that correct?

17 A. I would have to see the documents, but in  
18 reference to the document, can I see?

19 THE COURT: Well, hold on. Forget about the  
20 document. The question to you is, other than on March 8th,  
21 2022, have you ever disclosed that?

22 THE WITNESS: Oh, I thought I had.

23 BY MS. McFARLANE:

24 Q. You thought you had?

25 A. Yes. The agreement was that it was during a

1 high-speed wind-up turn from our 2015 post-meeting  
2 discussion.

3 Q. For the sake of time, I won't show you every  
4 single statement from that time. But you don't recall -- is  
5 it fair to say, you don't recall whether in the eight times  
6 leading up to that that you ever discussed a conversation  
7 with Mark Forkner, isn't that correct?

8 A. I don't recall if I had a conversation with Mark  
9 Forkner?

10 THE COURT: No, the question -- no, her question  
11 is very simple. It is, you met with the Government eight  
12 times, investigators, prosecutors, whoever.

13 THE WITNESS: Yes.

14 THE COURT: You met with them eight times. Did  
15 you ever tell them in any of these eight times this  
16 conversation you had with Mr. Forkner other than on  
17 March 8th? That's the question.

18 And either you did or you didn't. Or you  
19 remember, or you don't.

20 THE WITNESS: Yes. The conversation was the post  
21 2015 meeting referring to the high-speed wind-up turn.

22 THE COURT: And when -- but do you understand the  
23 question? The question is, you met with them on these  
24 eight days. The information appears to be that you talked  
25 about it in the March 8th date, the March 8th meeting.

1 Do you remember telling them about it in any of  
2 the previous meetings?

3 BY MS. McFARLANE:

4 Q. To be clear. It is that Mark Forkner told you  
5 that it was wind-up turns and high speed.

6 A. My recollection is the 2015 meeting discussing it  
7 with Christine Walsh and Mark Forkner about how MCAS worked  
8 after the meeting. And he was present for the explanation  
9 of the high-speed wind-up turn.

10 Q. He was present for the explanation. Did he tell  
11 you?

12 A. No. Christine Walsh told me.

13 Q. Okay.

14 And so the only time you told the Government that  
15 was two weeks ago, that Mark Forkner told you?

16 A. I'm referencing that meeting in 2015, yes.

17 Q. Okay. We'll move on.

18 Ms. Klein, you also talk about, after the sim  
19 chat, the November 15, 2016 chat, that you met with Mark  
20 Forkner and others in Miami. Do you recall that, saying  
21 that on direct?

22 A. That was not in Miami; that was at Boeing in  
23 Seattle.

24 Q. Oh, at Boeing. Okay. My apologies. At Boeing.  
25 And you said it was shortly after that sim ride,



1 correct?

2 A. Yes. The following week.

3 Q. Okay.

4 And you said on direct that you asked Mark Forkner  
5 about the sim ride and he said, "Everything's fine, but  
6 there's a few kinks to work out"?

7 A. Yes.

8 Q. Great.

9 And a few kinks to out, Mark Forkner was telling  
10 you there were a few kinks to work out in the simulator,  
11 correct? Because you asked him about the simulator?

12 A. Yes.

13 Q. Okay.

14 And that's common to have kinks in a simulator,  
15 isn't that correct?

16 A. It's very common --

17 Q. Very common.

18 A. -- in the simulator.

19 Q. To have thousands of issues with simulators while  
20 in development, isn't that common?

21 A. Well, I don't know about thousands, but it's  
22 common in the development process, yes.

23 Q. So it would not surprise you that this kink that  
24 Mark Forkner experienced in the simulator was kink number  
25 1,079. So 1,079, that would not surprise you, would it?

1 A. No.

2 Q. Okay.

3 And you may or may not know this, but when folks  
4 like Mark Forkner and others that are in a simulator  
5 discover a kink, or an issue, or an error, they write  
6 something in a report.

7 Do you know what that's called?

8 A. Yes, they write it up in a report. I can't recall  
9 what it's called.

10 Q. It is a discrepancy report, right?

11 A. Okay.

12 Q. And so if they see an issue or a kink in the  
13 simulator, they write it in what's called a discrepancy  
14 report, correct?

15 A. Correct.

16 Q. All right.

17 And so what Mark Forkner was telling you, he saw a  
18 kink in the simulator, and you would expect him to write  
19 that up in the discrepancy report, right? If he saw a kink?

20 A. Sure.

21 Q. Okay.

22 Now, you also talked about on direct that if you  
23 had known about expanded MCAS, you would have re-evaluated  
24 it, correct?

25 A. Yes, ma'am.

1 Q. All right.

2 And by re-evaluating it, you mean you would have  
3 went to Kevin Green, a test pilot for instance, and had him  
4 test it out, isn't that correct?

5 A. No.

6 Q. That would not have been one of the things you  
7 did?

8 A. No.

9 Q. Aren't test pilots used to test out differences in  
10 the plane to determine whether there's pilot training  
11 necessary to see if there's differences?

12 A. No. That's our job.

13 Q. That's your job. You actually do that?

14 A. Yes.

15 Q. So you fly the plane to determine whether there's  
16 difference in the plane?

17 A. Yes, or the simulator, yes.

18 Q. Or the simulator.

19 A. Yes.

20 Q. So what are test pilots for?

21 A. Test pilots find compliance to the aircraft  
22 certification regulations, the Part 25 regulations. I find  
23 compliance to the Part 121 and 135 regulations.

24 Q. You're right, compliance. That's not what I'm  
25 asking.

1           If you knew of a difference in the plane, between  
2 the NG and the MAX, for instance, and you wanted to know  
3 what, if any, differences there would be for the pilot,  
4 wouldn't you ask Kevin Green to fly whatever that difference  
5 would be?

6           MR. ARMSTRONG: Objection, your Honor, asked and  
7 answered.

8           THE COURT: Overruled.

9           Go ahead and answer, or answer again, if it has  
10 been.

11           THE WITNESS: Occasionally, we would have flight  
12 tests look at something for us if we were not available to  
13 fly.

14 BY MS. McFARLANE:

15           Q. Right. That's common. That's something that you  
16 would do.

17           A. It's not common, no.

18           Q. But it's something that you would do, correct?

19           A. It's something we have done in the past, yes.

20           Q. Okay.

21           And, in fact, you talked about a T2 test on  
22 direct, which is actually a test where you fly the airplane,  
23 right, and evaluate it. The handling qualities, correct?

24           A. Handling qualities.

25           Yes.

1 Q. And by handling qualities, it's what the pilot  
2 experiences, correct? On the plane? When flying the plane?

3 A. Yes. It's the flight controls and the handling of  
4 the aircraft.

5 Q. And you were actually on that flight, August 9th,  
6 2016, when they tested the handling qualities of the MAX,  
7 correct?

8 A. Yes.

9 Q. All right.

10 And when you were on that flight, they actually  
11 flew a stall, isn't that correct?

12 A. Yes, we flew a stall.

13 Q. And MCAS activated but you did not know?

14 A. That's correct. Well, I don't know if it  
15 activated, but we did stall in the aircraft.

16 Q. So you checked out the scenario in which MCAS  
17 would activate a stall, correct?

18 A. We did a stall in the aircraft, yes.

19 Q. Okay.

20 Did you do a wind-up turn?

21 A. No. A wind-up turn is for certification.

22 Q. Correct. But you did a stall?

23 A. Yes.

24 Q. And MCAS activated, but you did not know it  
25 because it's transparent to the pilot, correct?

1 A. Correct.

2 Q. Okay.

3 A. Just to clarify, I said correct that we did a  
4 stall. I don't know if it activated.

5 THE COURT: Is that because it's transparent?

6 THE WITNESS: Yes.

7 MS. McFARLANE: Correct.

8 THE COURT: You didn't know. Or it might have not  
9 activated, if it wasn't working?

10 THE WITNESS: Right.

11 THE COURT: Is there -- will there be records,  
12 like if you land the plane, can you punch a button and it  
13 pulls up whether it activated or not?

14 THE WITNESS: The flight test engineers in the  
15 back probably have records; we don't get those.

16 BY MS. McFARLANE:

17 Q. And there was records of this flight, wasn't  
18 there?

19 A. Yes. It was an AED T2 test, correct.

20 Q. Right.

21 And in that T2 test, the pilots that flew the  
22 plane that you were on, they said all said, "This feels just  
23 like the NG," didn't they?

24 A. Yes.

25 Q. They all said, "This MAX, this new plane feels

1 just like the NG, there aren't any differences that we can  
2 tell," isn't that correct?

3 A. Correct.

4 Q. And when you don't have differences it's  
5 commonality, right, in the AC, that's the word that was used  
6 in the AC, between the planes?

7 A. Uh-huh.

8 Q. And you get, like you said, a lower level of  
9 training, isn't that correct?

10 A. The T2 test is for the type rating determination.  
11 The T3 test is for the training differences, for lower  
12 levels of differences.

13 Q. And even in the T3 test, there weren't -- they  
14 still felt and flew the plane as if it was the NG, it was  
15 still the same response, isn't that correct?

16 A. The T3 was evaluating the system differences, that  
17 did not include MCAS.

18 Q. So the T2 test that did include MCAS, everyone  
19 said, "This flew just like the NG"?

20 MR. ARMSTRONG: Objection, your Honor, asked and  
21 answered.

22 THE COURT: Overruled.

23 THE WITNESS: We didn't know the MCAS had been  
24 expanded, so we were not testing the MCAS as part of the T2,  
25 no.

1 THE COURT: Her question, though, is just the T2  
2 flight itself.

3 THE WITNESS: Yes. Right.

4 BY MS. McFARLANE:

5 Q. And at that time, MCAS had been expanded and was  
6 on the plane that you were on, correct?

7 A. I did not know that at the time.

8 Q. That wasn't my question.

9 A. I didn't know the MCAS was expanded.

10 Q. But you do know that now, that on that flight, the  
11 T2 flight you were on, on August 16th -- I'm sorry --  
12 August 2016, MCAS had been expanded and it felt just like  
13 the NG, correct? You know that now?

14 A. The aircraft passed the T2.

15 Q. So pilots didn't say, "This feels just like the  
16 NG"?

17 A. Yes, they did.

18 Q. Okay. Thank you.

19 As part of the certification process, Ms. Klein,  
20 you talked about an issue paper --

21 A. Yes.

22 Q. -- that you drafted, right?

23 A. Yes.

24 Q. And you put the issues that you saw that could  
25 threaten Level B, isn't that correct?



1 A. Yes.

2 Q. In this issue paper, correct?

3 A. Yes.

4 Q. And you listed about eight or so issues. I may  
5 not have the number just right, but there were a more than a  
6 few issues, correct?

7 A. Yes.

8 Q. And MCAS was not listed as one of them, isn't that  
9 correct?

10 A. That's correct.

11 Q. Okay.

12 MCAS was not a threat to Level B at that time,  
13 correct?

14 A. As we understood the system, no, it was not.

15 Q. Ms. Klein, I want to talk about the decision to  
16 remove MCAS from the FCOM, which is sort of the training  
17 manual for pilots, right?

18 A. Uh-huh.

19 Q. And you agreed to remove it from the FCOM because  
20 it was your understanding that it was transparent and  
21 outside the normal operating envelope, correct?

22 A. Correct.

23 Q. And that was your same conclusion even after you  
24 learned of the expansion, we talked about that earlier?

25 A. No. That's not correct.

1 Q. Okay. Well, we'll let your testimony stand.

2 But the reason why you agreed when it was  
3 transparent and outside the normal operating envelope is  
4 because transparent functions or invisible functions should  
5 not be in the FCOM, isn't that correct?

6 A. No, that's not correct.

7 Q. Transparent functions that are outside the normal  
8 operating envelope?

9 A. Oh, outside the normal operating -- that's  
10 correct.

11 Q. That is correct, okay.

12 A. Yes.

13 Q. That was my fault.

14 A. I thought you were just asking about transparent  
15 functions.

16 Q. So transparent and outside the normal operating  
17 envelope should not be in the FCOM, is that correct?

18 A. Correct.

19 Q. Okay.

20 And so when Mark Forkner asked you to remove it,  
21 that's not something that's out of the ordinary or, you  
22 know, wrong to ask to remove something that is transparent  
23 and outside the normal operating envelope, correct?

24 A. Incorrect. That was very unusual.

25 Q. It was unusual to ask you to remove something

1 that's transparent and outside the normal operating  
2 envelope?

3 A. Yes. The first time we had been asked to remove  
4 something from a training document like that.

5 Q. But you said that should not be in the FCOM,  
6 correct?

7 A. The reasoning and the system function at the time  
8 supported the request. But that's -- that was not normal.

9 Q. Let me be very clear.  
10 If a system is transparent and outside the normal  
11 operating envelope, it should not be in the FCOM, correct?

12 A. If a pilot does not interact with it, it should  
13 not be in the FCOM.

14 Q. Okay. Thank you.  
15 We referred to an incident in October of 2018,  
16 correct?

17 A. Yes, ma'am.

18 Q. And that incident involved Lion Air, correct?

19 A. Correct.

20 Q. All right.

21 And after that incident, you testified that you  
22 learned that MCAS had been expanded down to .2, correct?

23 A. Yes.

24 Q. And as we saw in Exhibit 187, or the document I  
25 just gave you, that was after the incident, correct? When

1 you said it was still -- it's not a system that a flight  
2 crew would ever experience, correct? That was after the  
3 incident?

4 MR. ARMSTRONG: Objection, your Honor, we went  
5 over this.

6 MS. McFARLANE: This is a different topic, your  
7 Honor.

8 THE COURT: Overruled.

9 THE WITNESS: We were still gathering information.  
10 We didn't know how the system completely worked at this  
11 time.

12 BY MS. McFARLANE:

13 Q. You did not know how the system MCAS worked at  
14 this time, after the incident?

15 A. We didn't have all of the details or the  
16 investigation had not been far enough along to know all of  
17 the intricate details of the system. I don't think.

18 Q. Okay.

19 I've handed you, I handed you this to refresh your  
20 recollection.

21 This is a document, an email, your email, correct?

22 A. Yes. My email to colleagues back and forth.

23 Q. To colleagues in the FAA. And this was produced  
24 to us by the Department of Justice.

25 MS. McFARLANE: And, your Honor, we have a

1 business record affidavit for this document. We would offer  
2 Defense Exhibit 187 into evidence.

3 MR. ARMSTRONG: Your Honor, what's the relevance?

4 THE COURT: What is --

5 MS. McFARLANE: Materiality, your Honor.

6 MR. ARMSTRONG: Your Honor can we approach?

7 THE COURT: Okay.

8 (Sidebar without being reported.)

9 BY MS. McFARLANE:

10 Q. Ms. Klein?

11 A. Yes, ma'am.

12 Q. This document that you have was written by you  
13 November 5th, 2018, correct? The portion that I referred  
14 you to before.

15 A. This portion here that you're talking about?

16 Q. It's the second page, remember? You've already  
17 testified to this. Do you see that?

18 A. Yes.

19 Q. Okay.

20 So this was written by you November 5th, 2018,  
21 correct?

22 A. Correct.

23 Q. And this was after the incident with Lion Air in  
24 October of 2018, isn't that correct?

25 A. Yes. This was less than a week after that.

1 Q. Right. And that incident happened not at high  
2 speeds, correct? It happened at low speeds, isn't that  
3 correct?

4 A. Yes. It happened at mid speeds, mid initial. I  
5 guess low speeds, yes.

6 Q. So you learned that MCAS had expanded to low-speed  
7 at this time and you still said that, "MCAS, it was right to  
8 take it out of the FCOM because it is not a system that a  
9 flight crew would experience and it is not designed to work  
10 in the normal envelope of the aircraft," isn't that correct?

11 And you even said, "Kevin Green agrees with the  
12 decision."

13 Kevin Green is a test pilot with the FAA, isn't  
14 that correct?

15 A. Yes. But I was talking about the expanded -- the  
16 high-speed decision, and that it was transparent and outside  
17 the normal operating envelope, yes. That's correct.

18 Q. But you were saying this after you learned about  
19 low expansion, correct? You didn't say in this email that  
20 we were wrong, did you?

21 A. No.

22 Q. Okay.

23 In fact, what you said in later correspondence was  
24 that, "A decision to increase training level above Level B  
25 was purely political," do you recall saying that?

1 A. No.

2 Q. You don't recall saying that?

3 A. There was a lot going on. If you have a document  
4 that would --

5 Q. I do have a document.

6 A. -- it would be really helpful.

7 MS. McFARLANE: Can I have Defense Exhibit 23B?

8 May I approach, your Honor?

9 BY MS. McFARLANE:

10 Q. Let me know when you're ready, Ms. Klein.

11 A. I'm ready.

12 Q. Does this refresh your recollection, Ms. Klein?

13 A. Yes. But it was about FTC 12.1.1, not the  
14 original software.

15 Q. This was the updated software for MCAS, correct?

16 A. That's correct.

17 Q. But even in the updated software, it was still  
18 down to low-speed, correct?

19 A. Yes, but it had safety precautions that the other  
20 software did not.

21 Q. Safety precautions like what?

22 A. It -- there was software developed into it that  
23 would automatically turn it off if an erroneous activation  
24 occurred.

25 Q. Erroneous activation, correct?

1 A. Yes.

2 Q. All right.

3 And erroneous activation meant when MCAS would  
4 trigger when it wasn't supposed to based on what?

5 A. Yes. And it would also not repeatedly trigger.

6 Q. Repeatedly trigger, correct?

7 A. No. The original software developed was a  
8 repeated function and this software update took that  
9 function away.

10 Q. But you said on direct that if you knew about the  
11 expanded MCAS, that it would be level E?

12 A. Yes, but this is 12.1.1. This is a different  
13 software than 11.1.1.

14 Q. Ms. Klein, listen to my question.

15 A. Okay.

16 Q. On direct, isn't it true that you said, if you  
17 knew about the expanded MCAS, it would be a level E,  
18 correct?

19 Do you recall saying that on direct?

20 THE COURT: Is that what you said on direct?

21 THE WITNESS: Yes. But I was referring to --

22 THE COURT: Hold on. Okay.

23 BY MS. McFARLANE:

24 Q. Okay.

25 And in an email that we just looked at, you did



1 know about the expanded MCAS?

2 A. Yes.

3 Q. And you said it was transparent and outside the  
4 normal operating envelope, correct? And, in fact, several  
5 days later after that, the FAA issued an AD, do you recall  
6 that?

7 A. Yes.

8 Q. And what is an AD, Ms. Klein?

9 A. It's an air worthiness directive.

10 Q. An air worthiness directive. And it goes out to  
11 all of the airlines and pilots, correct?

12 A. It goes out to -- yes, all of the airlines. They  
13 have to incorporate it into their manual.

14 Q. And the FAA sent this AD out to the airlines?

15 A. Uh-huh.

16 Q. Because the incident that happened in October of  
17 2018, correct?

18 A. Correct.

19 Q. And this AD was sent just maybe weeks after in  
20 November 7th, 2018, correct?

21 A. Correct.

22 Q. And the AD didn't say, we now require simulator  
23 training, right?

24 A. No, it did not.

25 Q. In fact, the AD said, follow what?

1           A.    Follow the runaway stabilizer checklist, if there  
2 were all of these other flight deck effects occurring.

3           Q.    Right.

4                    Follow what you already know how to do when you  
5 see a runaway stabilizer, isn't that correct?

6           A.    Correct.

7           Q.    There wasn't any additional training added, even  
8 after you knew about the expanded MCAS. It said follow the  
9 training you already had, correct?

10          A.    We still hadn't evaluated it for pilot training.  
11 We were evaluating what we knew at the time and thought that  
12 was the best information that we had, that that was  
13 sufficient.

14          Q.    And at the time you knew it was down to low-speed?

15          A.    That's correct.

16          Q.    Okay.

17                    Thank you.

18                    Now, Ms. Klein, you maintained on direct that no  
19 one told you about low-speed expansion?

20          A.    That's correct.

21          Q.    That you learned after the crash?

22          A.    That's correct.

23          Q.    Right?

24                    And you even said on the stand that Mark Forkner  
25 knew and he lied to you.

1 A. Yes.

2 Q. Do you recall saying that?

3 A. I do.

4 Q. And you said, not only did Mark Forkner not tell  
5 you, really nobody at Boeing tried to tell you, isn't that  
6 right?

7 A. Yes.

8 MS. MCFARLANE: May I have Defense Exhibit 12A?

9 This is my last topic area, your Honor.

10 May I approach, your Honor?

11 THE COURT: Yes.

12 MS. MCFARLANE: Thank you.

13 BY MS. MCFARLANE:

14 Q. Can you take a look at that document, Ms. Klein?

15 A. Yes. If you'd give me a moment to review.

16 Q. Sure. Let me know when you're ready.

17 I'm only going to ask a few questions about it.

18 A. Thank you. I'm still getting up to speed. I'm  
19 trying to understand, there's a date that says this was to  
20 start the week of July 5th, 2015, but the when and where  
21 says July 5th, 2016.

22 Q. I can explain.

23 This, as you can see, this again has the  
24 Department of Justice's Bates numbers on it, which means we  
25 received this document from the Government, who received it

1 from Boeing -- I'm sorry -- the FAA, actually, not Boeing.  
2 My apologies.

3 MS. McFARLANE: And we have a business record for  
4 this document, your Honor.

5 We would like to offer Defendants' Exhibit 12A.

6 THE COURT: 12A?

7 MS. McFARLANE: Yes.

8 MR. ARMSTRONG: What is the relevance?

9 MS. McFARLANE: Pages 1, 2, and 16.

10 MR. ARMSTRONG: What Bates?

11 MS. McFARLANE: 2274. The second page. And then  
12 it's number 16 on the bottom. 2293.

13 MR. ARMSTRONG: No objection.

14 THE COURT: 12A will be admitted.

15 (The referred-to document was admitted in Evidence  
16 as Defendant's Exhibit 12A.)

17 MS. McFARLANE: Thank you, your Honor.

18 All right. If we can put 12A on the screen for  
19 everyone to see.

20 BY MS. McFARLANE:

21 Q. All right.

22 Ms. Klein, this is a meeting placeholder for a  
23 tech familiarization meeting. And you're familiar with tech  
24 familiarization meetings, right?

25 A. I am.

1 Q. That's when Boeing and others, FAA, other  
2 counterparts get together to talk about the specs on a  
3 plane, the 737 MAX, correct?

4 A. Yes.

5 Q. And the placeholder for this meeting was between  
6 July 5th, 2016, after MCAS expanded in March 2016, just so  
7 we know.

8 A. I didn't know that.

9 Q. And July 16th, 2016, right?

10 And if you see, under required attendees, your  
11 name is listed there, Stacey Klein.

12 MS. McFARLANE: We can highlight that.

13 BY MS. McFARLANE:

14 Q. And if we go to the second page, it says -- this  
15 is from about Patrice Adjibly?

16 A. Adjibly.

17 Q. I pronounced it incorrectly, Patrice Adjibly.

18 And it says, "I've also attached the TCCA work  
19 plan which details the TCCA requirement. I added an FAA  
20 team column to identify needed FAA support."

21 Okay? And TCCA is Canada, right?

22 A. Yes. It's the regulatory oversight agency for  
23 Canadian airlines.

24 Q. So it's like the Canada FAA?

25 A. Correct.

1 Q. Okay.

2 And then if we go to page 16 of that document,  
3 several of the topic areas, they requested for handling  
4 qualities, for instance, where they discussed MCAS --

5 MS. McFARLANE: Can we highlight that FT9? Let's  
6 start with FT9.

7 BY MS. McFARLANE:

8 Q. Again, this is July, the week of July 11th, 2016.

9 MS. McFARLANE: Could we highlight number 2?

10 BY MS. McFARLANE:

11 Q. Briefing on maneuver characteristics augmentation  
12 system, MCAS, right?

13 And they requested your attendance from the FAA,  
14 correct? That's your name, Stacey Klein?

15 A. Yes. I don't recall this.

16 Q. Okay.

17 That's okay. We will get there.

18 MS. McFARLANE: Can I have 12C, please?

19 BY MS. McFARLANE:

20 Q. Now, what I'm handing you what's been premarked  
21 Defense Exhibit 12C, which would be the actual presentation  
22 for that agenda item that we just saw.

23 MS. McFARLANE: Your Honor, can I approach?

24 THE COURT: Yes.

25 ///

1 BY MS. McFARLANE:

2 Q. As you can see, this is a presentation with sort  
3 of the same picture we see on all of the Boeing  
4 presentations of the MAX plane.

5 It has a Boeing Bates number on the bottom that we  
6 got from Boeing, or actually we got it from the Government,  
7 who got it to from Boeing, and we've got an official  
8 business record for this as well.

9 Your Honor, the Defense offers Exhibit 12C into  
10 evidence.

11 MR. ARMSTRONG: Your Honor, we would object.  
12 Ms. Klein has testified that she has no recollection of this  
13 meeting. There's no foundation for this presentation having  
14 been at this meeting at all.

15 MS. McFARLANE: Your Honor, we have a business  
16 record affidavit to authenticity and official business  
17 record and an agenda item.

18 THE COURT: Okay. 12C will be admitted.

19 (The referred-to document was admitted in Evidence  
20 as Defendant's Exhibit 12C.)

21 MS. McFARLANE: All right. Could we show that on  
22 the screen?

23 BY MS. McFARLANE:

24 Q. All right.

25 So we've seen presentations like this before, and

1 you've seen them, Ms. Klein. In fact, we looked at one from  
2 June of 2015, when they discussed MCAS as well as May 2014,  
3 and you forgot about the May 2014 one. Do you recall that?

4 A. Yes.

5 Q. All right.

6 So this is July 2016, about the briefing on new  
7 and changed control systems.

8 MS. McFARLANE: Can we highlight that?

9 BY MS. McFARLANE:

10 Q. In July 2016. And this is the very presentation,  
11 if you see FT9, FT8, and FT9, those were the agenda items at  
12 which they requested your presence? Do you recall that?

13 A. I don't recall attending this meeting.

14 Q. I didn't ask that question.

15 But you did see the agenda item in which this is  
16 the very presentation that they requested your presence,  
17 correct?

18 A. Uh-huh.

19 Q. Okay.

20 MS. McFARLANE: If we can go to page 7, MCAS  
21 Overview.

22 BY MS. McFARLANE:

23 Q. "It's a new system on the MAX. Drive stabilizer  
24 input in the airplane nose-down direction to enhance  
25 stability at high angles of attack."



1 Two functions.

2 MS. McFARLANE: Let's highlight that.

3 BY MS. McFARLANE:

4 Q. Improves high Mach stick force gradient and  
5 improves low-speed stall characteristics.

6 Isn't that the very thing you said no one tried to  
7 tell you?

8 A. Yes.

9 Q. But they did try to tell you in July of 2016,  
10 isn't that correct?

11 A. I don't remember this meeting.

12 Q. The question is, did Boeing tell you or attempt to  
13 tell you in July 2016 of the change in MCAS?

14 A. I don't recall being at this meeting. I'm sorry.

15 Q. That is not my question.

16 THE COURT: Well, other than this meeting, has  
17 Boeing tried to tell you that?

18 THE WITNESS: No.

19 BY MS. McFARLANE:

20 Q. Okay. That's one meeting.

21 Let's go to another one.

22 October 2016.

23 MS. McFARLANE: Can I have Defense Exhibit 14A?

24 May I approach, your Honor?

25 THE COURT: Yes.

1 MS. McFARLANE: Your Honor, this is another agenda  
2 item, a document we received from the Department of Justice,  
3 who received it from the FAA. We have a business records  
4 affidavit for it as well as the presentation that was  
5 provided along with that agenda item. So we are requesting  
6 to offer Defendant's Exhibit 14A, and the presentation, 14C.

7 MR. ARMSTRONG: Your Honor, same objection. There  
8 is no foundation for these presentations.

9 THE COURT: Do you want to ask some questions  
10 about these first?

11 MS. McFARLANE: No problem, your Honor.

12 THE COURT: Let's see.

13 BY MS. McFARLANE:

14 Q. You have a copy of 14A in front of you, Ms. Klein.

15 A. Okay.

16 Q. And you can see that this is for October 2016,  
17 correct?

18 A. Correct.

19 Q. And again, from the same, as the last presentation  
20 sent from Patrice -- I'm going to mispronounce the last  
21 name.

22 A. Adjibly.

23 Q. From the FAA to you, isn't that correct?

24 A. Yes. I'm listed.

25 Q. All right.

1           And this is very similar to the last invite that I  
2 showed as well, right? This is just a different  
3 presentation in October, correct?

4           A. Yes.

5           Q. And it's related to the 737 MAX, correct?

6           A. I don't know what the contents of the attachment  
7 is. I don't recognize it.

8           Q. I can give you the attachment.

9           MS. McFARLANE: If I can approach, your Honor?

10          THE COURT: Yes.

11          BY MS. McFARLANE:

12          Q. So as you can see, this is again a Boeing  
13 presentation, just like the one we just looked at from  
14 July 2016, correct?

15          A. Uh-huh.

16          THE COURT: Is that a yes?

17          THE WITNESS: Yes.

18          BY MS. McFARLANE:

19          Q. And it's related to MAX airplane, correct?

20          A. Yes, to the MAX.

21          MS. McFARLANE: Your Honor, Defendants offer  
22 Exhibits 14A and 14C.

23          THE COURT: Okay. 14A and 14C will be admitted.

24          ///

25          ///

1 (The referred-to documents were admitted in  
2 Evidence as Defendant's Exhibit 14A and 14C.)

3 BY MS. McFARLANE:

4 Q. All right. If we can go to 14C, please. Again,  
5 this is a presentation, October 2016, in which Patrice  
6 Adjibly invited you to attend, where Boeing updated your  
7 group and others at FAA about the flight control systems.

8 Do you see that? MCAS is the flight control  
9 system on the MAX.

10 Now, let's go to the next page.

11 This is very similar to the presentation we just  
12 saw, right? Under two functions, so I'm going to belabor  
13 the point. But if you can see, it says, "Improves low-speed  
14 stall characteristics."

15 So, again, when you say that no one at Boeing  
16 tried to tell you or told you about low speeds -- low-speed  
17 stall characteristics of the MCAS, we now have two examples  
18 in which they did.

19 A. I don't recall being at these meetings, ma'am.

20 Q. Okay. And we will represent to you, Ms. Klein,  
21 that we have two more examples.

22 A. Okay.

23 Q. Would you like to see those?

24 A. Yes, I would.

25 MS. McFARLANE: For speed, your Honor, 20A,

1 Defense Exhibit 20A is an April 2017 invitation, and 20C is  
2 the very same presentation. And 21A is another presentation  
3 from May 2017, all of which have official business records  
4 received from the FAA and provided by the Government.

5 THE COURT: So do you remember attending meetings  
6 on these very same subjects in April of 2017 and May of  
7 2017?

8 THE WITNESS: No, I do not.

9 THE COURT: Okay. Well, I'm going to -- 20A and  
10 20C?

11 MS. McFARLANE: 20A, 20C and 21A, your Honor.

12 THE COURT: And 21A.

13 MS. McFARLANE: Yes, your Honor.

14 THE COURT: Not C.

15 MS. McFARLANE: No, your Honor.

16 THE COURT: Okay. So 20A, 20C and 21A will be  
17 admitted.

18 MS. McFARLANE: Thank you, your Honor.

19 (The referred-to documents were admitted in  
20 Evidence as Defendant's Exhibit 20A, 20C, and 21A.)

21 BY MS. McFARLANE:

22 Q. So, Ms. Klein, I've just given you four examples  
23 of meetings in which Boeing disclosed to your group that it  
24 was down to low-speed stall characteristics. Several of  
25 these meetings were before provisional Level B., before you

1 certified the plane, before you took MCAS out of the FCOM.

2 And you say today that you don't recall attending  
3 these meetings.

4 A. Correct.

5 Q. Why didn't you send a delegate to attend in your  
6 place?

7 A. I -- I'm not familiar with these meetings. I'm  
8 sorry, ma'am.

9 Q. Why didn't you send a delegate in your place?

10 A. It's -- it's not my responsibility to send a  
11 secondary or tertiary -- if they're available, they can go.  
12 It's not -- that's not how we get our primary source of  
13 information, ma'am.

14 Q. Presentations from Boeing is not how you get your  
15 primary source of information about the differences in the  
16 plane?

17 A. No. Mark Forkner presents the differences of the  
18 aircraft, ma'am.

19 Q. Okay.

20 But didn't you learn in May 2014 about MCAS from a  
21 presentation with the very same picture on it?

22 A. Yes. Where we all attended together to learn  
23 about the design of the aircraft.

24 Q. Mark Forkner did not present that to you, ma'am.

25 A. He was there to learn the same information as

1 myself.

2 Q. Did Mark Forkner present to you about MCAS in  
3 May 2014? Or was those other employees of Boeing?

4 A. It was the other employees of Boeing.

5 Q. Okay.

6 And Mark Forkner was not invited to these four  
7 different meetings I just discussed?

8 A. Yeah, I don't recall attending these meetings.

9 Q. And Mark Forkner was not even invited to attend  
10 them.

11 A. It's from the FAA; Patrice would only be inviting  
12 FAA personnel.

13 MS. McFARLANE: Your Honor, if I could have one  
14 moment, please.

15 Just a few more questions, Ms. Klein, and then I  
16 will wrap it up.

17 Could you pull up Defense Exhibit 20A, please?

18 Exhibit 20A, 20, A as in apple.

19 BY MS. McFARLANE:

20 Q. Okay.

21 Just really quickly just for the Jury to see, this  
22 is another agenda item, March 2017, you're invited on this.

23 MS. McFARLANE: If we can highlight her name.

24 BY MS. McFARLANE

25 Q. And Mark Forkner is not. And you've represented

1 today that you don't -- you don't recall attending this  
2 meeting, correct?

3 A. I don't recall attending this meeting, and  
4 Samantha wouldn't be inviting Boeing personnel to internal  
5 FAA; she would only be inviting FAA employees.

6 Q. Okay.

7 MS. McFARLANE: And then if we go to 20C, page 17  
8 of that quickly, please.

9 BY MS. McFARLANE

10 Q. This is the very presentation that you don't  
11 recall attending.

12 A. Correct.

13 MS. McFARLANE: Page 17. Or at least it's listed  
14 as 17. It's Bates number DOJ 2919. Okay. Yes.

15 BY MS. McFARLANE:

16 Q. And you can see, this presentation also that you  
17 missed, this is the third one, it says, "low-speed  
18 conditions," correct?

19 A. Yes. It does say that.

20 Q. Okay.

21 And then Exhibit 21A, in May of 2017, this is  
22 another tech familiarization meeting where your name is  
23 listed as a required attendee on the last line.

24 Mark Forkner is nowhere listed on this invitation,  
25 do you see that?



1 A. Yes, ma'am.

2 Q. Okay. You talked about when you saw the chat,  
3 where it says, it's down to low-speed, that you were angry,  
4 and you were sad, that you were appalled, how come no one  
5 could tell you.

6 Are you angry, sad, and appalled that you just  
7 found out you missed four meetings when you could have  
8 learned of low-speed MCAS?

9 A. It's Mark Forkner's job to tell me of the design  
10 changes, ma'am.

11 Q. Is that a no?

12 A. It's no.

13 MS. McFARLANE: Pass the witness, your Honor.

14 MR. ARMSTRONG: Ms. Holbrook, if you can please  
15 pull up Exhibit 22, please, 650 to 651.

16 REDIRECT EXAMINATION

17 BY MR. ARMSTRONG:

18 Q. Ma'am, this is the document that we talked about  
19 before, right?

20 A. Yes.

21 Q. And now Ms. McFarlane asked you questions about  
22 how, you don't know what you don't know, right?

23 A. Yes.

24 Q. It's not a terribly controversial point, right?

25 A. Right.

1 Q. At what time did Mr. Forkner say, shocker alert,  
2 MCAS now active, down to Mach .2?

3 A. November 15th, 2016, at 6:50 p.m.

4 Q. At what time?

5 A. 6:50 p.m.

6 Q. And then what did he say right there?

7 A. "So I basically lied to the regulators  
8 unknowingly."

9 Q. What time did he say that?

10 A. 6:51.

11 Q. How much time is between 6:50 and 6:51?

12 A. One minute.

13 Q. About how much time did it take Mr. Forkner to put  
14 two and two together?

15 MS. McFARLANE: Objection to the form of the  
16 question.

17 THE COURT: Sustained.

18 BY MR. ARMSTRONG:

19 Q. About how much time is between those two messages,  
20 ma'am?

21 A. One minute.

22 Q. Why was it important to your evaluation to know  
23 about MCAS being active down to a Mach .2 from Mr. Forkner?

24 A. Because I relied on Mark to be able to provide the  
25 system designs to us and the training proposal to us.

1 Q. Did Mr. Forkner say here, I basically lied  
2 unknowing to the regulators, but I'm sure Ms. Klein knows  
3 anyway?

4 A. No.

5 Q. Ms. McFarlane asked you some questions about the  
6 July 2016 meeting and the October 2016 meeting.

7 Do you recall those questions?

8 A. Yes.

9 MR. ARMSTRONG: Ms. Holbrook, will you please pull  
10 up 12A? Defense Exhibit.

11 I'm sorry, 14A.

12 BY MR. ARMSTRONG:

13 Q. Ma'am, this is an invitation that Ms. McFarlane  
14 asked you about, right?

15 A. Yes.

16 MR. ARMSTRONG: Ms. Holbrook, will you please blow  
17 that up?

18 BY MR. ARMSTRONG:

19 Q. Is Mr. Forkner listed anywhere on here?

20 A. No.

21 Q. So going back to you don't know what you don't  
22 know, how did Mr. Forkner know what you were being told  
23 maybe by someone else at FAA?

24 A. He would not have.

25 Q. Is the process of your evaluation as the chair of

1 the FSB supposed to work by maybe finding out information by  
2 chance?

3 A. No.

4 Q. Why not?

5 A. It's proposed by Mark Forkner's group and Mark  
6 Forkner.

7 MR. ARMSTRONG: No further questions, your Honor.

8 MS. McFARLANE: Nothing further.

9 THE COURT: You may step down.

10 Ladies and gentlemen, we probably should end here  
11 tonight because I understand there's some weather coming in  
12 from the west, and so I want to go ahead and get you out of  
13 the building and into your car. I don't know how close it  
14 is, but it looks sunny out there. That's never a good sign.  
15 So I want to get you out.

16 But please remember all of my instructions.  
17 Please don't conduct any independent investigation. Please  
18 avoid any type of news coverage that might talk about this  
19 case.

20 We're moving through it at a decent clip. We will  
21 be towards the end of it in no time. After it's over, you  
22 can do all of that you want. Please, in the interim,  
23 remember those instructions.

24 We will start again, hopefully, by 9 a.m. in the  
25 morning, just as soon as you are all here and we can get you

1 in the courtroom. If that's earlier, we will be here  
2 earlier to get you in. So please be careful going home.  
3 Have a good night and we will see your first thing in the  
4 morning.

5 THE COURT SECURITY OFFICER: All rise.

6 (The jurors exited the courtroom.)

7 THE COURT: Okay. Please be seated.

8 Okay. Don't be late again. Be here on time and  
9 early on time. When they're ready, we get them in the box.  
10 Don't be walking in late and not without a witness here as  
11 well.

12 MR. ARMSTRONG: Understood.

13 THE COURT: Anything else we need to take up?

14 MR. JACOBS: No, your Honor.

15 MS. McFARLANE: No, your Honor.

16 THE COURT: All right. We will see you-all in the  
17 morning.

18 (Proceedings concluded at 5:00 p.m.)  
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C E R T I F I C A T E

We, Zoie M. Williams, RMR, RDR, FCCR and Kelli Ann Willis, RPR, CRR, CSR certify that the foregoing is a transcript from the record of the proceedings in the foregoing entitled matter.

We further certify that the transcript fees format comply with those prescribed by the Court and the Judicial Conference of the United States.

This 22nd day of March 2022.

s/ Zoie M. Williams  
s/ Kelli Ann Willis  
Official Court Reporters  
The Northern District of Texas  
Fort Worth/Dallas Divisions

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