

EXHIBIT 1

PROPOSED ALTERNATIVE STATEMENT OF FACTS

Naoise Connolly Ryan et al.¹ (the “victims’ families” or “families”), respectfully submit to the Court the following proposed statement of facts, which supplements the limited recitation of facts made by the Government and Boeing in connection with their proposed plea agreement. The following facts include and add to the 55 facts already provided by the parties, all of which are relevant to the Court’s decision whether to accept the plea and whose accuracy is reasonably established by or inferable from the sources cited herein. The additional facts are in **red bold font**.

1. The following Statement of Facts is incorporated by reference as part of the Deferred Prosecution Agreement (the “Agreement”) between the United States Department of Justice, Criminal Division, Fraud Section (the “Fraud Section”), the United States Attorney’s Office for the Northern District of Texas (the “USAO-NDTX”) and The Boeing Company (“Boeing” or the “Company”). The Company hereby agrees and stipulates that the following information is true and accurate. The Company admits, accepts, and acknowledges that it is responsible for the acts of its officers, directors, employees, and agents as set forth below. Should the Fraud Section or the USAO-NDTX pursue the prosecution that is deferred by this Agreement, the Company agrees that it will neither contest the admissibility of, nor contradict, this Statement of Facts in any such proceeding. The following facts establish beyond a reasonable doubt the charge set forth in the Information attached to this Agreement:

¹ In addition to Ms. Ryan, the other victims’ family members filing this motion are Emily Chelangat Babu and Joshua Mwazo Babu, Catherine Berthet, Huguette Debets, Luca Dieci, Bayihe Demissie, Sri Hartati, Zipporah Kuria, Javier de Luis, Nadia Milleron and Michael Stumo, Chris Moore, Paul Njoroge, Yuke Meiske Pelealu, John Karanja Quindos, Guy Daud Iskandar Zen S., and others similarly situated. Many family members support this motion. On Friday of this week, the families will file with the Court an Appendix of other supporters of this motion.

Background

At all times relevant to this Statement of Facts, with all dates being approximate and inclusive:

Boeing's New Airplane: The 737 MAX

2. The Boeing Company (“Boeing”) was a U.S.-based multinational corporation that designed, manufactured, and sold commercial airplanes to airlines worldwide. Boeing operated from various locations, including in and around Seattle, Washington.

3. Boeing’s airline customers included major U.S.-based airlines headquartered in the Northern District of Texas and elsewhere.

4. The Boeing 737 was a commercial airplane that could seat approximately 200 passengers and was one of Boeing’s best-selling airplane models. Boeing began designing, manufacturing, and selling the Boeing 737 in the 1960s. Over time, Boeing designed, manufactured, and sold new versions of the Boeing 737 to its airline customers, including major U.S.-based airlines.

5. In or around June 2011, Boeing began developing and marketing a new version of its Boeing 737 called the 737 MAX. The 737 MAX was designed by Boeing as a competitive answer to a new version of an airplane developed by one of Boeing’s top rivals in commercial airplanes, Company-1. Like the new version of Company-1’s airplane, the 737 MAX promised increased fuel efficiency over its prior version, the 737 Next Generation (“737 NG”). With this increased efficiency, the 737 MAX offered fuel-cost savings for airlines.

The FAA AEG’s Role in Determining Pilot “Differences Training” for New Airplanes

6. Before any U.S.-based airline could operate a new commercial airplane, U.S. regulations required the Federal Aviation Administration (“FAA”), an organization within the

United States Department of Transportation, to evaluate and approve the airplane for commercial use. Without this approval, a U.S.-based airline would not be permitted to operate the airplane.

7. As part of this evaluation and approval process, the FAA had to make two distinct determinations: (i) whether the airplane met U.S. federal airworthiness standards; and (ii) what minimum level of pilot training would be required for a pilot to fly the airplane for a U.S.-based airline. These two determinations were made by entirely different groups within the FAA that were composed of different personnel with different organizational structures and different reporting lines.

8. The FAA Aircraft Evaluation Group (“AEG”) was principally responsible for determining the minimum level of pilot training required for a pilot to fly the airplane for a U.S.-based airline. To make that determination, the FAA AEG compared the new version of the airplane (such as the 737 MAX) to a similar, prior version of the airplane (such as the 737 NG). After evaluating the differences between the new and prior versions of the airplane, the FAA AEG mandated the minimum level of pilot training, known as “differences training,” for the new version.

9. Based on the nature and extent of the differences between the new and prior version of the airplane, the FAA AEG assigned a level of differences training ranging from “Level A” through “Level E.” These levels of differences training ranged in rigor, with “Level A” being the least intensive and “Level E” the most intensive. As relevant here, “Level B” differences training generally included computer-based training (“CBT”), and “Level D” differences training generally included full-flight simulator training.

10. At the conclusion of the FAA’s evaluation of the new version of the airplane, the FAA AEG published a Flight Standardization Board Report (“FSB Report”). Among other things,

the FSB Report contained relevant information about certain airplane systems and parts that the airplane manufacturer was required to incorporate into airplane manuals and pilot-training materials for all U.S.-based airlines that would fly the airplane. The FSB Report also contained the FAA AEG's differences-training determination.

Boeing's Organization Designation Authorization (ODA) Program

10a. Starting in 2005, under Title 49 of the United States Code (49 U.S.C.) § 44702(d), the FAA could delegate to a qualified private person a matter related to issuing certificates, or related to the examination, testing, and inspection necessary to issue a certificate on behalf of the FAA Administrator. The Organization Designation Authorization (ODA) program is the means by which the FAA grants designee authority to organizations or companies. ODA holders are typically authorized to conduct the types of FAA functions which they would normally seek from the FAA. For example, aircraft manufacturers may be authorized to approve design changes in their own products.²

10b. The FAA ODA program was fully phased in by 2009. Boeing was an organization designee.³

10c. At Boeing, employees working as part of the ODA program were known as "Authorized Representatives," abbreviated as "AR," and they represented the FAA within the company, including oversight and authorization for compliance and training issues.

Boeing's 737 MAX Chief Technical Pilots

² (FAA Delegated Organizations, https://www.faa.gov/other_visit/aviation_industry/designees_delegations/delegated_organizations)

³ (FAA Office of Inspector General Audit Report Number AV-2011-136, June 29, 2011, available at <https://www.oig.dot.gov/sites/default/files/FAA%20ODA%206-29-11.pdf>)

11. Boeing's 737 MAX Flight Technical Team was principally responsible for identifying and providing to the FAA AEG all information that was relevant to the FAA AEG in connection with the FAA AEG's publication of the 737 MAX FSB Report. The 737 MAX Flight Technical Team was separate and distinct from another group within Boeing that was responsible for providing information to the FAA for certification of whether the airplane met U.S. federal airworthiness standards.

12. From in or around early 2012 until in or around early 2014, Boeing Employee-1 was a Technical Pilot for Boeing's 737 MAX Flight Technical Team. In or around early 2014, Boeing Employee-1 became Boeing's 737 MAX Chief Technical Pilot. In that role, Boeing Employee-1 led the 737 MAX Flight Technical Team. In or around July 2018, Boeing Employee-1 left Boeing to work for a major U.S.-based airline.

13. From in or around mid-2014 until in or around July 2018, Boeing Employee-2 was a Technical Pilot for Boeing's 737 MAX Flight Technical Team. In or around July 2018, after Boeing Employee-1 left Boeing, Boeing Employee-2 became Boeing's 737 MAX Chief Technical Pilot. In that role, Boeing Employee-2 led the 737 MAX Flight Technical Team.

14. Boeing Employee-1 and Boeing Employee-2 understood that the FAA AEG relied on them, as members of Boeing's 737 MAX Flight Technical Team, to identify and provide to the FAA AEG all information that was relevant to the FAA AEG in connection with the FAA AEG's publication of the 737 MAX FSB Report, including information that could impact the FAA AEG's differences-training determination.

15. Boeing Employee-1 and Boeing Employee-2 also understood that, because flight controls were vital to flying modern commercial airplanes, differences between the flight controls

of the 737 NG and the 737 MAX were especially important to the FAA AEG for purposes of its publication of the 737 MAX FSB Report and the FAA AEG's differences-training determination.

Overview of the Conspiracy to Defraud the FAA AEG

16. From at least in and around ~~November 2016~~ **May 2013** through at least in and around December 2018, in the Northern District of Texas and elsewhere, Boeing, through **its employees including but not limited to** Boeing Employee-1 and Boeing Employee-2, knowingly, and with intent to defraud, conspired to defraud the FAA AEG.

17. At all times during the conspiracy, **various Boeing employees, including but not limited to** Boeing Employee-1 and Boeing Employee-2 were acting within the scope of their employment and with the intention, at least in part, to benefit Boeing. The purpose of the conspiracy was to defraud the FAA AEG by impairing, obstructing, defeating, and interfering with the lawful function of the FAA AEG by dishonest means in connection with its publication of the 737 MAX FSB Report and its differences-training determination for the Boeing 737 MAX, in order to bring about a financial gain to Boeing ~~and to benefit Boeing Employee-1 and Boeing Employee-2~~ **and to benefit various Boeing employees** in connection with the Boeing 737 MAX.

Lead-Up to the Conspiracy and Scheme to Defraud

The Maneuvering Characteristics Augmentation System ("MCAS")

18. To achieve its promised fuel efficiency, the 737 MAX used larger engines than the 737 NG. These larger engines, and their placement under the airplane's wings, meant that the aerodynamics of the 737 MAX differed from those of the 737 NG.

19. These different aerodynamics created a new handling characteristic for the 737 MAX that caused the 737 MAX's nose to pitch up during a certain flight maneuver called a high-

speed, wind-up turn. A high-speed, wind-up turn generally involved sharply turning the airplane at high speed (approximately Mach 0.6-0.8) in a corkscrew-like pattern.

20. A high-speed, wind-up turn was a “certification” maneuver, that is, a maneuver outside the limits of what the 737 MAX would be expected to encounter during a normal commercial passenger flight. Nevertheless, if Boeing did not fix the 737 MAX’s pitch-up characteristic in high-speed, wind-up turns, the FAA could determine that the 737 MAX did not meet U.S. federal airworthiness standards.

21. To fix this pitch-up characteristic, Boeing created MCAS and incorporated it as a part of the 737 MAX’s flight controls. MCAS was an aircraft “part” within the meaning of Title 18, United States Code, Sections 31(a)(7) and 38. In operation, MCAS would automatically cause the airplane’s nose to pitch down by adjusting the 737 MAX’s horizontal stabilizer (a horizontal tail located near the rear of the airplane). As originally designed, MCAS could only activate during a high-speed, wind-up turn.

Boeing’s Financial Incentive and Manipulation of ODA Program to Secure No Greater than “Level B” Differences Training in the 737 MAX FSB Report

22. As Boeing knew, “Level B” differences training was significantly less expensive for airlines to complete than “Level D.” For example, a pilot could complete “Level B” differences training from anywhere in the world in a matter of hours using a computer or tablet. In contrast, a pilot could complete “Level D” differences training only by appearing in person wherever the pilot’s airline operated a full-flight simulator. Apart from the cost of acquiring one or more multimillion-dollar simulators and other related expenses, airlines that were required by the FAA AEG to train pilots on a full-flight simulator could also lose revenue that the pilot might otherwise have generated from flying airline passengers during that time. Accordingly, if the FAA AEG required a less rigorous level—such as “Level B”—of differences training for the 737 MAX in the

737 MAX FSB Report, the 737 MAX would be a more attractive option for Boeing’s airline customers already flying the 737 NG than switching to an entirely new airplane, such as the new version of Company-1’s airplane, as such customers would save significant money in pilot-training costs by transitioning to the 737 MAX.

23. Principally for this reason, Boeing’s stated objectives in designing the 737 MAX included securing the FAA AEG’s determination to require no greater than “Level B” differences training in the 737 MAX FSB Report.

23a. For example, [REDACTED]

[REDACTED]

(Attachment A-1, [REDACTED] **).**

23b. Later, [REDACTED]

[REDACTED]

[REDACTED] **(Attachment A-2,** [REDACTED] **).**

23c. In [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Attachment A-1).

23d. Likewise, Boeing Employee-1 and Boeing Employee-2 understood as much. For example, in or around November 2014, Boeing Employee-2 wrote in an internal Boeing electronic chat communication to Boeing Employee-1 that “nothing can jepordize [sic] level b[.]” In or around December 2014, Boeing Employee-1 wrote in an email to another Boeing employee that “if we lose Level B [it] will be thrown squarely on my shoulders. It was [Boeing Employee-1], yes [Boeing Employee-1]! Who cost Boeing tens of millions of dollars!”

Boeing Employee-1 and Other Boeing Employees Told the FAA AEG that MCAS was Limited to High-Speed, Wind-Up Turns

24. In or around June 2015, Boeing Employee-1 and other Boeing employees briefed the FAA AEG on MCAS. During this briefing, Boeing described MCAS as a system that could only activate during a high-speed, wind-up turn. After the briefing, Boeing Employee-1 and another Boeing employee further discussed MCAS with an FAA AEG employee (“FAA AEG Employee-1”) and reiterated to FAA AEG Employee-1 the limited operational scope of MCAS.

Boeing Subsequently Expanded MCAS’s Operational Scope Beyond High-Speed, Wind-Up Turns

25. Subsequently, Boeing expanded MCAS’s operational scope, including the speed range within which MCAS could activate, significantly altering its original design. Among other things, when the airplane registered a high angle of attack, the change expanded the speed range within which MCAS could activate from approximately Mach 0.6-0.8 to approximately Mach 0.2-0.8—that is, from only high-speed flight to nearly the entire speed range for the 737 MAX, including low-speed flight, which generally occurs at a lower altitude and in and around takeoff and landing. Boeing disclosed this expansion to FAA personnel, but only to those personnel who were responsible for determining whether the 737 MAX met U.S. federal airworthiness standards.

Boeing did not disclose the expansion to the FAA AEG personnel responsible for publishing the 737 MAX FSB Report and making the training-related determination.

Boeing Advocated for the FAA AEG to Publish the 737 MAX FSB Report with No Greater than “Level B” Differences Training

26. On or about August 16, 2016, before the FAA AEG published the 737 MAX FSB Report, the FAA AEG issued a provisional “Level B” differences-training determination for the 737 MAX. At the time of this provisional determination, the FAA AEG was unaware that Boeing had expanded MCAS’s operational scope.

27. On or about the same day, Boeing Employee-1 recognized Boeing’s achievement in an email to Boeing employees, including Boeing Employee-2, and wrote that the FAA AEG’s provisional determination “culminates more than 3 years of tireless and collaborative efforts across many business units” and that the 737 MAX program management “is VERY happy.”

28. As Boeing Employee-1 and Boeing Employee-2 knew, the FAA AEG based its provisional “Level B” differences training for the 737 MAX in part on its understanding that MCAS could only activate during the limited operational scope of a high-speed, wind-up turn.

29. Boeing Employee-1 and Boeing Employee-2 also understood, as Boeing Employee-1 acknowledged in his email on or about August 16, 2016, that the FAA AEG’s “Level B” differences determination for the 737 MAX was only a “provisional approval [. . .] assuming no significant systems changes to the airplane.”

30. For example, in an email to Boeing employees including Boeing Employee-2 discussing a potential change to another part of the 737 MAX’s flight controls on or about November 10, 2016, Boeing Employee-1 emphasized that “[o]ne of the Program Directives we were given was to not create any differences [. . .]. This is what we sold to the regulators who have

already granted us the Level B differences determination. To go back to them now, and tell them there is in fact a difference [. . .] would be a huge threat to that differences training determination.”

The Conspiracy Begins

“Shocker Alert”: Boeing Employee-1 and Boeing Employee-2 Discovered MCAS’s Expanded Operational Scope

31. On or about November 15, 2016, during a test flight of the 737 MAX in a simulator, Boeing Employee-1 experienced what Boeing Employee-1 recognized as MCAS operating at lower speed. Boeing Employee-1 further recognized that this lower-speed operation was different from what Boeing had briefed and described to the FAA AEG.

32. On or about that same day, Boeing Employee-1 and Boeing Employee-2 discussed MCAS in an internal Boeing electronic chat communication, writing in part:

Boeing Employee-1: Oh shocker alert! [sic] / MCAS is now active down to [Mach] .2 / It’s running rampant in the sim on me / at least that’s what [a Boeing simulator engineer] thinks is happening

Boeing Employee-2: Oh great, that means we have to update the speed trim description in vol 2

Boeing Employee-1: so I basically lied to the regulators (unknowingly)

Boeing Employee-2: it wasn’t a lie, no one told us that was the case

33. At this point, Boeing Employee-1 and Boeing Employee-2 recognized that the FAA AEG was under the misimpression that MCAS operated only during a high-speed, wind up turn and could not operate at lower Mach speeds, such as at Mach 0.2. Boeing Employee-1 and Boeing Employee-2 therefore knew, at least as of the time of this chat communication, that the FAA AEG’s provisional “Level B” differences-training determination had been based in part on outdated and inaccurate information about MCAS.

34. Boeing Employee-1 and Boeing Employee-2 also knew that MCAS's expanded operational scope was relevant to the FAA AEG's decisions about the content of the 737 MAX FSB Report, including whether to include information about MCAS. Boeing Employee-1 and Boeing Employee-2 similarly understood that it was their responsibility to update the FAA AEG about any relevant changes to the 737 MAX's flight controls—such as MCAS's expanded operational scope.

35. Despite knowing that the FAA AEG had issued its provisional “Level B” determination without any awareness that MCAS's operational scope had been expanded to include high angle of attack conditions in nearly the entire speed range of ordinary commercial flight, Boeing Employee-1 and Boeing Employee-2 did not correct the FAA AEG's understanding of MCAS's operational scope or otherwise ensure that the FAA AEG's “Level B” determination was based on an accurate understanding of MCAS's operation. Instead, Boeing—through Boeing Employee-1 and Boeing Employee-2—intentionally withheld and concealed from the FAA AEG their knowledge of MCAS's expanded operational scope.

Boeing, through Boeing Employee-1 and Boeing Employee-2, Deceived the FAA AEG about MCAS's Operational Scope and Told the FAA AEG to Delete MCAS from the 737 MAX FSB Report

36. For example, shortly after the simulated test flight described in paragraph 30, Boeing Employee-1 talked with FAA AEG Employee-1, who asked Boeing Employee-1 about the simulated test flight. Boeing Employee-1 intentionally withheld and concealed from FAA AEG Employee-1 the fact that MCAS's operational scope had been expanded beyond what the FAA AEG relied upon when it issued its provisional “Level B” differences-training determination for the 737 MAX.

37. Around the time that Boeing Employee-1 and Boeing Employee-2 discussed MCAS's expanded operational scope, Boeing Employee-1 asked a Boeing senior engineer

assigned to the 737 MAX program about MCAS's operational scope. The senior engineer confirmed to Boeing Employee-1 that MCAS could activate beyond the limited operational scope of a high-speed, wind-up turn. The senior engineer suggested that Boeing Employee-1 contact certain subject-matter experts at Boeing for more specific information about MCAS's operational scope.

38. On or about November 17, 2016, the FAA AEG emailed three Boeing employees, including Boeing Employee-1, Boeing Employee-2, and another Boeing employee, a draft of the forthcoming 737 MAX FSB Report. That same day, Boeing Employee-1 asked Boeing Employee-2 and the other Boeing employee to review the draft 737 MAX FSB Report "for any glaring issues."

39. On or about November 22, 2016, the other Boeing employee emailed the draft 737 MAX FSB Report back to the FAA AEG with proposed edits. Boeing Employee-1 and Boeing Employee-2 were included on this email. Boeing Employee-1 included a proposed edit to delete a reference to MCAS, and wrote, "We agreed not to reference MCAS since it's outside normal operating envelope." Neither Boeing Employee-1 nor Boeing Employee-2 shared the fact of MCAS's expanded operational scope with the FAA AEG or otherwise corrected the FAA AEG's misimpression that MCAS's operational scope was limited to high-speed, wind-up turns.

40. In doing so, Boeing Employee-1 and Boeing Employee-2 deceived the FAA AEG into believing that the basis upon which the FAA AEG had initially "agreed" to remove any information about MCAS from the 737 MAX FSB Report—that MCAS could only activate during the limited operational scope of a high-speed, wind-up turn—remained the same. Boeing Employee-1 and Boeing Employee-2 withheld their knowledge of MCAS from the FAA AEG to

avoid risking the FAA AEG taking any action that could threaten the differences-training determination for the 737 MAX.

41. On or about January 17, 2017, Boeing Employee-1 again reminded the FAA AEG in an email to delete any reference to MCAS from the forthcoming 737 MAX FSB Report, and wrote, “Flight Controls: Delete MCAS, recall we decided we weren’t going to cover it [. . .] since it’s way outside the normal operating envelope.” Again, Boeing Employee-1 deceived the FAA AEG into believing that the basis upon which the FAA AEG had initially “decided” to remove any information about MCAS from the 737 MAX FSB Report—that MCAS could only activate during the limited operational scope of a high-speed, wind-up turn—remained the same.

42. By concealing MCAS’s expanded operational scope from the FAA AEG, Boeing, through Boeing Employee-1 and Boeing Employee-2, defrauded, impaired, obstructed, defeated, and interfered with the FAA AEG’s lawful function to evaluate MCAS and to include information about MCAS in the 737 MAX FSB Report.

43. Based on Boeing’s misleading statements, half-truths, and omissions to the FAA AEG about MCAS, and in reliance on those statements and omissions, the FAA AEG agreed to delete all information about MCAS from the 737 MAX FSB Report.

44. From in or around January 2017 through in or around July 2017 (when the 737 MAX FSB Report was published), Boeing Employee-1 and Boeing Employee-2 sent and caused to be sent emails to representatives of various Boeing airline customers that had agreed to purchase the 737 MAX, including major U.S.-based airlines. In these emails, Boeing Employee-1 and Boeing Employee-2 or members of their 737 MAX Flight Technical Team referenced and included drafts of the forthcoming 737 MAX FSB Report and airplane manuals and pilot-training materials for Boeing’s 737 MAX airline customers. None of these items contained any information about

MCAS, consistent with Boeing Employee-1's and Boeing Employee-2's efforts to deceive the FAA AEG into deleting information about MCAS.

The FAA AEG Published the 737 MAX FSB Report Without Any Information about MCAS and Required No Greater than "Level B" Differences Training

45. On or about July 5, 2017, the FAA AEG published the first 737 MAX FSB Report, which included the FAA AEG's "Level B" differences-training determination for the 737 MAX.

46. Because of Boeing's intentional withholding of information from the FAA AEG, the final version of the 737 MAX FSB Report lacked information about MCAS, and relevant portions of this 737 MAX FSB Report were materially false, inaccurate, and incomplete. In turn, airplane manuals and pilot-training materials for U.S.-based airlines lacked information about MCAS, and relevant portions of these manuals and materials were similarly materially false, inaccurate, and incomplete as a result.

47. After the FAA AEG published the final version of the 737 MAX FSB Report, Boeing continued to sell, and Boeing's U.S.-based airline customers were permitted to fly, the 737 MAX. Pilots flying the 737 MAX for Boeing's airline customers were not provided any information about MCAS in their airplane manuals and pilot-training materials.

Lion Air Flight 610: The First 737 MAX Crash Exposed MCAS's Operational Scope

48. On October 29, 2018, Lion Air Flight 610, a Boeing 737 MAX, crashed shortly after takeoff into the Java Sea near Indonesia. All 189 passengers and crew on board died **as a direct and proximate result of Boeing's conspiracy. (ECF No. 116 at 15, 17).**

49. Following the Lion Air crash, the FAA AEG learned that MCAS activated during the flight and may have played a role in the crash. The FAA AEG also learned for the first time about MCAS's expanded operational scope.

50. In and around the same time, Boeing employees, including Boeing Employee-2, met with personnel from the FAA AEG to discuss, among other things, MCAS's operational scope. After that meeting, Boeing Employee-2 told FAA AEG Employee-1 that he was previously unaware of MCAS's expanded operational scope and otherwise misled FAA AEG Employee-1 about Boeing Employee-2's prior knowledge of MCAS.

51. Also, in and around the same time, Boeing Employee-2 caused Boeing to present a false and misleading presentation to the FAA AEG about MCAS. Boeing investigated, among other things, what information Boeing Employee-1 and Boeing Employee-2 provided to the FAA AEG about MCAS. In connection with this investigation, Boeing Employee-2 caused Boeing to represent in a presentation to the FAA AEG that, during the training-evaluation process, Boeing and the FAA AEG had "discussed and agreed on [the] removal of MCAS" from the 737 MAX FSB Report and associated materials. This representation was misleading because Boeing Employee-2 had failed to disclose the "shocker alert" chat communication and the fact that the FAA AEG was deprived of relevant information about MCAS.

52. Following the Lion Air crash, Boeing proposed changes to the operational scope of MCAS, and the FAA AEG worked with Boeing to evaluate these changes to MCAS for purposes of pilot training.

Boeing Works to Conceal the True Cause of the Lion Air Crash

52a. On [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Attachment A-3, [REDACTED]).

52b. In the immediate aftermath of the Lion Air crash, Boeing issued a statement: “The Boeing Company is deeply saddened by the loss of Lion Air Flight JT 610. We extend our heartfelt sympathies to the families and loved ones of those on board.” However, Boeing “shied away from taking responsibility for the MCAS issues that clearly contributed to the fatal crash of Lion Air flight 610.”⁴

52c. On November 6, 2018, eight days after the Lion Air crash, Boeing issued an Operations Manual Bulletin (OMB) that directed airline operators and flight crews to various flight crew procedures to address erroneous angle-of-attack (AOA) sensor data, which was—one week after the crash of the Lion Air flight—believed to be a core contributing cause of the accident. The OMB issued by Boeing had the subject line, “Uncommanded Nose Down Stabilizer Trim Due to Erroneous Angle of Attack (AOA) During Manual Flight Only.” The “reason” given for the bulletin was, “To emphasize the Procedures Provided in the Runaway Stabilizer Non-Normal Checklist (NNC).” The “Background Information” section of the OMB said: “The Indonesian National Transportation Safety Committee has indicated that Lion Air flight 610 experienced erroneous AOA data. Boeing would like to call attention to an AOA failure condition that can occur during manual flight only. This bulletin directs flight crews to existing procedures to address this condition.”⁵

52d. Noticeably absent from the Boeing bulletin was any reference to the “Maneuvering Characteristics Augmentation System” or “MCAS.” It did include a

⁴ House Committee on Transportation and Infrastructure: The Final Committee Report: The Design, Development & Certification of the Boeing 737 MAX (Sept. 2020) at 193 (“House Transportation Comm. Rep.”) available at <https://democrats-transportation.house.gov/download/20200915-final-737-max-report-for-public-release>.

⁵ House Transportation Comm. Rep. at 192-93 (*emphasis in original OMB*).

description of the operational conditions associated with MCAS, though. “In the event of erroneous AOA data, the pitch trim system can trim the stabilizer nose down in increments lasting up to 10 seconds,” it said. “The nose down stabilizer trim movement can be stopped and reversed with the use of the electric stabilizer trim switches but may restart 5 seconds after the electric stabilizer trim switches are released. Repetitive cycles of uncommanded nose down stabilizer continue to occur unless the stabilizer trim system is deactivated through use of both STAB TRIM CUTOUT switches in accordance with the existing procedures in the Runaway Stabilizer NNC [Non-Normal Conditions].”⁶

52e. In a set of safety recommendations issued following the Lion Air and Ethiopian Airlines accidents, the U.S. National Transportation Safety Board observed that Boeing failed to account for the multitude of seemingly unrelated cautions and warnings, including an attention-getting stick shaker, when assessing that only four seconds would be needed for pilots to successfully respond to an erroneous MCAS activation. Moreover, a University of North Dakota researcher concluded in his dissertation in 2016 that pilots don’t regain their full cognitive abilities for 30 to 60 seconds after a “startle” event. The conspicuous omission from the Boeing OMB of information relevant to the role of the startle factor in the Lion Air accident is consistent with Boeing’s failure to establish realistic assumptions regarding the time necessary for pilots to successfully respond to an erroneous MCAS activation.⁷

52f. One of Boeing’s key goals for the 737 MAX program was ensuring that pilot simulator training on the MAX was not required. The Boeing OMB failed to directly alert

⁶ House Transportation Comm. Rep. at 194.

⁷ House Transportation Comm. Rep. at 196.

crews to the fact that the Lion Air pilots were overcome by multiple warnings and alerts leading to confusion in the cockpit. It also did not reference MCAS.⁸

52g. The OMB did indicate to flight crews, however, that the AOA Disagree alert, which was a standard feature on all 737 MAX aircraft and which the FAA required to be functional on every MAX aircraft Boeing delivered, was only working on less than 20 percent of those aircraft where the Boeing customers had also purchased the optional AOA Indicator. But it did this in a subtle, nuanced way. Boeing simply wrote: “AOA DISAGREE alert (if the AOA indicator option is installed).” Even in the wake of the Lion Air crash Boeing continued to obscure information related to the 737 MAX rather than being straightforward, transparent, and complete in the data they provided.⁹

52h. On November 7, 2018, the day after Boeing issued its OMB, the FAA issued an Emergency Airworthiness Directive (AD) to owners and operators of the 737 MAX. The FAA Emergency AD that was issued included a list of “potential effects and indications” of erroneous AOA input that is almost identical to the list in the Boeing OMB. Specifically, it directed flight crews to comply with Runaway Stabilizer procedures if they experienced uncommanded horizontal stabilizer trim movement combined with one of the following conditions:

- Continuous or intermittent stick shaker on the affected side only.
- Minimum speed bar (red and black) on the affected side only.
- Increasing nose down control forces.
- IAS DISAGREE alert.

⁸ House Transportation Comm. Rep. at 195-96.

⁹ House Transportation Comm. Rep. at 196.

- **ALT DISAGREE alert.**
- **AOA DISAGREE alert (if the option is installed).**
- **FEEL DIFF PRESS light.**
- **Autopilot may disengage.**
- **Inability to engage autopilot.**

Neither the FAA's AD nor Boeing's OMB mentioned MCAS, depriving MAX pilots of important information.¹⁰

52i. On November 27, 2018, two weeks after Boeing issued its Multi-Operator Message (MOM) alert to its 737 MAX customers, Boeing officials sat down with representatives from the Allied Pilots Association (APA), the union that represents the 15,000 pilots that fly for American Airlines at APA's headquarters in Fort Worth, Texas. American Airlines had 24 MAX airplanes in service at the time of the Lion Air crash. The tense meeting was recorded and the transcript was provided to the media and the House Transportation Committee. According to the draft transcript of that meeting, one of the Boeing officials attempted to explain away MCAS to the American Airlines pilots: "MCAS is a control law, which it's—it's in the flight control system. So it's just a little bit of software in the flight control system that is designed to change the handling characteristics of the airplane at high angles of attack." The efforts by Boeing to underplay the significance of MCAS by describing it simply as a "little bit of software" that was a "control law" within the flight computer while technically accurate, is demonstrably misleading. "Control laws" are not afterthoughts or

¹⁰ House Transportation Comm. Rep. at 198.

unnecessary appendages of technical systems. They play pivotal roles in the function, utility, and safety of a multitude of various technologies.¹¹

52j. At the APA meeting, the Boeing official also suggested that regardless of the cause of stabilizer trim runaway, whether it was due to MCAS or something else, that the procedures to correct that condition were all the same. But a frustrated APA official, referring to the Lion Air pilots said, “These guys didn’t even know the damn [MCAS] system was on the airplane – These guys didn’t even know the damn system was on the airplane. ... [N]or did anybody else... that’s the problem I have.” Despite the heated exchanges, one of the Boeing officials attempted to emphasize that safety was Boeing’s number one priority:

You’ve got to understand that our commitment to safety is as great as yours. It really is. And the worst thing that can ever happen is a tragedy like this, and the—and the even worse thing would be another one. So we have to do all the things we can to make sure that this never happens again, and we will, and we always do. We have that commitment to safety.

Fifteen weeks later, the 737 MAX suffered its second fatal crash.¹²

52k. Boeing’s failure to disclose the very existence of MCAS to MAX pilots was its most well-known omission, but there were others too. In the aftermath of the Lion Air crash, Boeing attempted to focus attention on the pilots as a central cause of the accident. However, they did not share the fact that one of Boeing’s own test pilots in late 2012 had failed to recover from uncommanded MCAS activation that led to runaway stabilizer trim in a flight simulator. While FAA guidance indicates that pilots should recognize and react to a runaway stabilizer condition in four seconds, it took the Boeing test pilot more than 10 seconds—an amount of time that could have resulted in a catastrophic outcome were it to have occurred

¹¹ House Transportation Comm. Rep. at 203.

¹² House Transportation Comm. Rep. at 205.

on an actual flight. This was a fundamentally important event that Boeing chose not to share with the FAA or its MAX customers.¹³

Abusing Its ODA Designee Status, Boeing Works to Control and Minimize FAA Investigation and Response

52l. In response to the airworthiness directive, Boeing’s Chief Executive Officer Dennis A. Muilenburg emailed Boeing’s Chief Financial Officer warning of the possible hit to productivity of the additional safety measure implemented by the FAA: “[w]e need to be careful that the [airplane flight manual] doesn’t turn into a compliance item that restricts near-term deliveries.” *In re Boeing Co. Derivative Litig.*, No. CV 2019-0907-MTZ, 2021 WL 4059934 at 33 (Del. Ch. Sept. 7, 2021).

52m. On [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. (Attachment A-4, [REDACTED]).

52n. On [REDACTED]

[REDACTED]
[REDACTED]
(Attachment A-5, [REDACTED]).

52o. On [REDACTED]

[REDACTED]
[REDACTED]

¹³ House Transportation Comm. Rep. at 206-07.

[REDACTED]

(Attachment A-6, [REDACTED] at 8-9).

52p. At that time, two instances of uncommanded and erroneous MCAS had been reported, and one resulted in a crash.¹⁴ In other words, the actual data for crew response failure rate was 50%.

52q. On [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Attachment A-7, [REDACTED] at 3).

52r. [REDACTED]

[REDACTED]

[REDACTED] (Attachment A-7,

[REDACTED] at 6).

52s. [REDACTED]

[REDACTED] (Attachment

A-8, [REDACTED]). Practically, this would have resulted in pausing growth of the fleet, and perhaps would have resulted in discontinued operations of the 737 MAX.

Boeing Continues to Conceal the Full Operational and Training Impact of MCAS from Pilots and the Public

¹⁴ House Transportation Comm. Rep. at 8-9.

52t.

[REDACTED]
[REDACTED] publicly Boeing took credit with regard to the ability of pilots to respond to uncommanded and erroneous MCAS. On November 13, 2018, Muilenburg appeared on the FOX Business Network and stated Boeing had been “very transparent on providing information,” the MCAS procedure was already “part of the training manual,” and the “737 MAX is a very safe airplane.” (Attachment A-9, [REDACTED]).

52u. On

[REDACTED]
[REDACTED]
[REDACTED]” (Attachment A-10, [REDACTED]).
[REDACTED]
[REDACTED]

52v. This email was an overt act by Muilenburg in furtherance of the conspiracy to deceive the FAA. Of course, [REDACTED]
[REDACTED] then that might lead to regulators, investors, and the flying public discovering what was going on.

52w. On

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]. (Attachment A-12, [REDACTED]).

52x. If [REDACTED]
[REDACTED] the AD—and pilots’ ability to respond to the situation it described—would have been clarified, likely preventing the crash of flight ET 302 on March 10, 2019 and saving 157 lives.

52y. On December 6, 2018, Muilenburg appeared on CNBC’s Fast Money and in response to a question about pilot complaints about a lack of MCAS information, stated, “We’re in constant communication with our customers, we’re very confident that we’re providing the information that they need.... We are taking a look at that to make sure all the appropriate training is in place and the communications with our customers are there. It’s very, very important to us. But I will say, bottom line here, very important, is that the 737 MAX is safe. We’re very confident in that. We have not changed our design philosophy. These are airplanes that are handled well, in the control of the pilots. They’re designed the same way our previous 737s are, take advantage of those systems. And the proof of that, is you look around the world today, all of our customers are flying all of their MAXs daily around the world. The airplane is safe, and we’re very confident in that.... Part of what we wanted to accomplish was seamless training for our customers.” He emphasized that 737 MAX production was being ramped up, and the airplanes were oversold. (Attachment A-13).

Boeing Assures the Public that the 737 MAX is “as Safe as Any Airplane that has Ever Flown the Skies” while Working to Remediate the “Airplane Safety Issue.”

52z. On or about November 15, 2018, senior executives at Boeing, including Muilenburg, were informed that the SRB had identified the crew workload issue associated with unintended MCAS activation due to erroneous AOA data as an “airplane safety issue”

that required remediation, and that Boeing engineers were working on redesigning the MCAS software to address the issue. (Attachment A-11, *In the Matter of the Boeing Co., Respondent.*, Release No. 11105 at ¶ 39 (Sept. 22, 2022)).

52aa. Also, on or about November 15, 2018, Boeing's Communications team began working with senior Boeing engineers and lawyers, among others, to draft a press release to update the public following the Lion Air Crash (the "Draft Press Release"), which would evolve to become the November 2018 Press Release. (Attachment A-11 at ¶ 40).

52ab. Early versions of the Draft Press Release generally confirmed the plane's safety, stating that the 737 MAX was either a "safe airplane" or that it "continue[d] to be safe to fly." Certain versions also noted that Boeing was working with the FAA to "expedite the development and certification of a flight control software update" for MCAS. (Attachment A-11 at ¶ 41).

52ac. During this time period, Boeing was the subject of extensive negative media coverage over allegations that Boeing had withheld information from pilots, airlines, regulators and the general public regarding MCAS. Other articles raised concerns about MCAS being too powerful and/or relying on a single sensor, and about the integrity of the certification process for the 737 MAX. (Attachment A-11 at ¶ 42).

52ad. Boeing's stock price was also dropping during this time. By November 20, 2018, Boeing's stock price had fallen by 11.6% since the Lion Air Crash. (Attachment A-11 at ¶ 43).

52ae. On November 20, 2018, Muilenburg expressed disappointment in Boeing's response to the negative post-crash media coverage, stating in an email that "[w]e are

spending too much time playing defense... [we] need to start playing some offense.” (Attachment A-11 ¶ 44).

52af. The next day, an official at the U.S. National Transportation Safety Board (“NTSB”) emailed Boeing a draft of the preliminary report on the Lion Air accident investigation (the “Lion Air Preliminary Report”), which was expected to be released to the public by the Indonesian government within the coming days. (Attachment A-11 at ¶ 45).

52ag. Later that day, the Communications team sent Muilenburg and other executives an updated version of the Draft Press Release. After reviewing the draft, Muilenburg directed that the Draft Press Release be modified to incorporate a discussion of facts drawn from the Lion Air Preliminary Report, and also suggested removing discussion of the planned MCAS software redesign from the Draft Press Release. (Attachment A-11 at ¶ 46).

52ah. On November 24, 2018, the Communications team began revising the Draft Press Release in accordance with Muilenburg’s instructions. As a result, the Draft Press Release underwent significant changes as its focus shifted to the Lion Air Preliminary Report. (Attachment A-11 at ¶ 47).

52ai. From that point forward, the Draft Press Release no longer mentioned the development of an “MCAS software update,” and also stated that Boeing’s customers and passengers “have [Boeing’s] assurance that the 737 MAX is as safe as any airplane that has ever flown the skies.” In the days that followed, Muilenburg and other executives worked with the Communications team to further revise the Draft Press Release. (Attachment A-11 at ¶ 48).

52aj. On the afternoon of November 27, 2018, Muilenburg approved the issuance of the November 2018 Press Release via email, writing, “Looks great – factual, and sticks to the report while making our key points. Good to go here” The November 2018 Press Release was published on Boeing’s website that evening, just after the public release of the Lion Air Preliminary Report by the Indonesian government. (Attachment A-11 at ¶ 49).

52ak. The November 2018 Press Release highlighted certain facts from the Lion Air Preliminary Report suggesting that pilot error and poor airplane maintenance by Lion Air had contributed to the crash. The November 2018 Press Release did not mention that the SRB had identified an ongoing “airplane safety issue” associated with MCAS or the planned software redesign – indeed, it did not mention MCAS at all. The final November 2018 Press Release also contained the statement: “As our customers and their passengers continue to fly the 737 MAX to hundreds of destinations around the world every day, they have our assurance that the 737 MAX is as safe as any airplane that has ever flown the skies.” (Attachment A-11 at ¶ 50).

52al. Prior to the issuance of the November 2018 Press Release, Boeing provided drafts to the FAA and NTSB for informational purposes, and those drafts contained the “as safe as any airplane that has ever flown the skies” language. After the November 2018 Press Release was published, a senior official at the NTSB complained to Boeing, via email, that the November 2018 Press Release was not appropriate given Boeing’s involvement in the crash investigation, and that “the omission of certain facts and the highlighting of other facts [in the November 2018 Press Release] leads the reader to Boeing’s analytical conclusion.” (Attachment A-11 at ¶ 51).

52am. On November 28, 2018, the first trading day following the public release of the Lion Air Preliminary Report and Boeing’s after-hours publication of the November 2018 Press Release, Boeing’s stock closed at \$333.5, up 4.8% from the prior day’s close (compared to a 2% gain for the S&P 500). (Attachment A-11 at ¶ 52).

52an. The November 2018 Press Release – in particular, the statement that “the 737 MAX is as safe as any airplane that has ever flown the skies” – was misleading under the circumstances absent any discussion of an “airplane safety issue” that required remediation by fixing the MCAS software. Accordingly, Muilenburg provided false information in connection with the November 2018 Press Release. (Attachment A-11 at ¶ 53).

52aq.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Attachment A-14, [REDACTED]).

52ar. On

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED] (Attachment A-15, [REDACTED]).

Boeing Continues to Pump Profits from Uninterrupted Deliveries of the 737 MAX

52as. With uninterrupted growth of the fleet, Boeing won 5,211 orders for the 737 MAX. By the end of 2018, 330 deliveries had been made.¹⁵ To be conservative, we will stop our calculation at the end of 2018, even though the conspiracy continued after that. With regard to the before-tax profit per plane, Boeing Commercial Airplanes Division reported 262 net orders during Q4 2018, valued at \$16 billion.¹⁶ In Q4, Boeing received 287 total gross orders, with 248 gross 737 MAX orders.¹⁷ To be conservative, assume all 25 canceled orders were MAX aircraft, resulting in 223 net MAX orders. The approximate value of these orders was \$13.6 billion, or \$61 million per aircraft. In 2018, Boeing's operating margin was 13%—as reflected in Boeing's Form 10-K for the year.¹⁸ Using the \$61 million per aircraft valuation, Boeing's profit per plane was \$7.9 million. Multiplying (1) and (2) together, with 330 deliveries through 2018 at a profit of \$7.9 per plane, Boeing earned \$2,607,000,000 in MAX aircraft deliveries made possible through its criminal conspiracy to defraud the FAA.

¹⁵ Boeing Orders & Deliveries Report, available at <https://www.boeing.com/commercial#orders-deliveries>.

¹⁶ Id.

¹⁷ Id.

¹⁸

<https://www.sec.gov/Archives/edgar/data/12927/000001292719000010/a201812dec3110k.htm/>.

52at. Boeing’s actual profit margin may have been substantially higher. Citing Moody’s, Business Insider reported profit margins for the 737 MAX of \$12-15 million per aircraft before the crash of Ethiopian Airlines flight 302.¹⁹

52au. Notably, Boeing’s stock price reached a record high on March 1, 2019—producing a “gain” to the company (and its insiders) that is not captured by the calculations above.

52av. The Commercial Airplane operating margins increased in Q4 2018 to 15.6%, in large part as a result of the 737 program. By January 2019, the 737 program was projected to be at 90% MAX aircraft.²⁰

52aw. In light of these facts, a reasonable and conservative calculation of Boeing’s net pecuniary gain from its crime is \$2,607,000,000.

52ax. Muilenburg was compensated with \$23 million in 2018, according to Boeing’s proxy statement—on top of the \$49 million he earned during the previous two years. That is a total of \$72 million dollars, or roughly \$2 million a month. Similarly, the Chief Executive Officer of Boeing Commercial Airplanes was paid more than \$57 million during his nearly three years at the company, or roughly \$1.6 million a month.

52ay. Internally, Muilenburg knew the MCAS problem was an ongoing safety issue. On January 16, 2019, he sent his monthly business summary and competitor dashboard to the Board. He briefly updated the Board on the Lion Air accident investigation. For the first time, he acknowledged to the Board that Boeing had been working on an MCAS software

¹⁹ Business Insider, March 13, 2019, available at <https://www.businessinsider.com/boeing-737-max-profit-moodys-2019-3>.

²⁰ Q4 2018 The Boeing Company Earnings Conference Call transcript at p. 25, January 30, 2019, available at <https://investors.boeing.com/investors/events-presentations/event-details/2019/Q4-2018-The-Boeing-Company-Earnings-Conference-Call/default.aspx>

update: “While the investigation proceeds with our full support, we’re also exploring potential 737 MAX software enhancements that, if made, will further improve the safety of the systems.”²¹ On February 13, 2019, he sent the Board the February business summary and competitor dashboard. In it, he provided a brief summary about the MCAS software fix, described euphemistically as a “software enhancement:” “we’ll continue to work closely and methodically with the [FAA] on a 737 MAX software enhancement that, when implemented, will further improve system safety.”²²

52az. Meanwhile, in Q1 2019, 95 additional MAX aircraft were ordered, with another 57 deliveries made. Boeing Orders & Deliveries Report. Boeing’s stock price reached a record high on March 1, 2019.²³

Boeing’s Senior Officers are Briefed on the November 15, 2016 Chat

52ba. In the wake of the Lion Air Crash, the DOJ began an investigation into the 737 MAX certification process. In January 2019, while collecting documents in connection with the DOJ’s investigation, members of Boeing’s Legal Department uncovered a series of communications that raised questions about the disclosures made to the FAA-AEG concerning the differences training and manuals certification, including the November 15, 2016 Chat in which Boeing Employee-1 wrote that he had “lied to regulators (unknowingly)” about MCAS. (Attachment A-16, *In the Matter of Dennis A. Muilenburg, Respondent*, Release No. 11106 at ¶ 61 (Sept. 22, 2022).

²¹ *In re Boeing Co. Derivative Litig.*, No. CV 2019-0907-MTZ, 2021 WL 4059934 at 44 (Del. Ch. Sept. 7, 2021).

²² *Id.* at 42.

²³ <https://investors.boeing.com/investors/stock-information/>

52bb. In or around January 2019, Boeing’s in-house counsel informed Muilenburg and other senior executives about the existence of the November 15, 2016 Chat. Following that communication, Muilenburg understood the November 15, 2016 Chat to be “concerning.” Muilenburg did not take any steps to learn additional details about the November 15, 2016 Chat. (Attachment A-16 at ¶ 62).

52bc. The November 15, 2016 Chat – like the documentation issues highlighted in the MCAS Certification Compliance Review report – raised significant questions concerning the adequacy of Boeing’s disclosures about MCAS in connection with the FAA-AEG’s review and approval of pilot training requirements and flight manuals for the 737 MAX, including the omission of MCAS from the differences training and the flight manuals. (Attachment A-16 at ¶ 63).

Ethiopian Airlines Flight 302: The Second 737 MAX Crash and the Grounding of the Fleet

53. On March 10, 2019, Ethiopian Airlines Flight 302, a Boeing 737 MAX, crashed shortly after takeoff near Ejere, Ethiopia. All 157 passengers and crew on board died **as a direct and proximate cause of the conspiracy. (ECF No. 116 at 15, 17).** Following the Ethiopian Airlines crash, the FAA AEG learned that MCAS activated during the flight and may have played a role in the crash.

54. On March 13, 2019, the 737 MAX was officially grounded in the United States, indefinitely halting further flights of this airplane by any U.S.-based airline.

55. Once again, looking at the ET 302 crash, accident investigators determined that the accident involved repeated unintended activations of MCAS triggered by erroneous data from an AOA sensor. (Attachment A-11 at ¶ 64).

56. On March 13, 2019, three days after the Ethiopian Airlines Crash, the FAA issued an order grounding the entire 737 MAX fleet due to ongoing safety concerns; similar grounding orders were issued by regulators around the world. Ultimately, more than 20 months would elapse before the 737 MAX was once again permitted to fly. (Attachment A-11 at ¶ 65).

Boeing Continues to Try to Cover Up the MCAS Problem with More False Statements

57. The extensive negative media coverage of Boeing that followed the Lion Air Crash intensified after the Ethiopian Airlines Crash and the subsequent grounding, as did the downward pressure on Boeing's stock price. (Attachment A-11 at ¶ 66).

58. Boeing's first quarter earnings call occurred on April 24, 2019. On that call, Muilenburg, on behalf of Boeing, responded to analysts' questions concerning MCAS and the certification process for the 737 MAX. During the questioning, one analyst asked in relevant part: "how did this slip through the engineering organization? How did it slip through the FAA... because it doesn't seem like there was a lot of new science going on here... [t]his seemed to be applications of existing technology to an existing platform." Muilenburg's answer stated in relevant part:

[T]here is no technical slip or gap here... we know that both accidents were a series of events... in this case, there was erroneous angle-of-attack information that came into the airplane from multiple causes... at some point during the flight, that activated the MCAS control laws, and we know that ultimately there were actions or actions not taken that contributed to the final outcome...

But I can tell you with confidence that we understand our airplane, we understand how the design was accomplished, how the certification was accomplished, and remain fully confident in the product that we've put in the field. But we also know there are areas that we can improve, and that is the source of the software update here. But there was no surprise or gap or unknown here or something that somehow slipped through a certification process. Quite the opposite. We know exactly how the airplane was designed. We know exactly how it was certified. We have taken the time to understand that....

(Attachment A-11 at ¶ 67) (Emphasis added.)

59. Five days later, on April 29, during a press conference following Boeing's annual shareholders' meeting, a reporter asked Muilenburg whether the MCAS design was deeply flawed. Muilenburg, on behalf of Boeing, responded in relevant part: "We have gone back and confirmed again ... that we followed exactly the steps in our design and certification processes that consistently produce safe airplanes. It was designed per our standards. It was certified per our standards." (Attachment A-11 at ¶ 68) (Emphasis added.)

60. The April 2019 Statements were misleading under the circumstances absent any discussion of the questions raised by the discovery of the November 15, 2016 Chat and the MCAS Certification Compliance Review concerning the adequacy of Boeing's disclosures to the FAA-AEG in connection with the FAA-AEG's review and approval of pilot training requirements and flight manuals for the 737 MAX. (Attachment A-11 at ¶ 69).

Boeing's Delays Its Cooperation with Justice Department's Investigation

61. Once Boeing was made aware of the Justice Department's Fraud Section's criminal investigation into the circumstances surrounding the 737 MAX and MCAS, Boeing delayed its cooperation with that investigation and only began cooperating after the first six months of the Fraud Section's investigation. During those six months, the Company's response frustrated the Fraud Section's investigation. (ECF No. 4 at ¶ 4(c)).

Boeing's Culpability for Its Crime

62. Boeing is a large U.S. corporation with more than 5,000 employees. With corporate offices near Washington, D.C., Boeing employs more than 170,000 people across the United States and in more than 65 countries.²⁴

²⁴ <https://www.boeing.com/company/general-info#overview>.

63. Muilenburg was Boeing's CEO from July 2015 until December 2019, when he stepped down in the wake of the two Boeing 737 MAX crashes.²⁵ As the CEO of Boeing, Muilenburg was obviously a "high-level person" at Boeing within the meaning of the applicable U.S. Sentencing Guidelines. *See* U.S.S.G. § 8C2.5 App. Note 3.²⁶

64. Muilenburg participated in Boeing's conspiracy. As alleged in the criminal information, the purpose of Boeing's criminal conspiracy was "impairing, obstructing, defeating, and interfering with, by dishonest means, the lawful function of a United States government agency, to wit, the Federal Aviation Administration Aircraft Evaluation Group ("FAA AEG") within the United States Department of Transportation, in connection with the FAA AEG's evaluation of the Boeing 737 MAX airplane's Maneuvering Characteristics Augmentation System ("MCAS"), including for purposes of the 737 MAX Flight Standardization Board Report ("FSB Report") and the 737 MAX differences-training determination."²⁷ Muilenburg, together with the Boeing Company, knowingly committed and caused to be committed at least one overt act in furtherance of the conspiracy, including the acts alleged in ¶¶ 52l-52n, 52t-52v, 52y-52ar, 52ax-52ay, 57-61.

65. Muilenburg also condoned Boeing's conspiracy, by failing to take reasonable steps to terminate the conspiracy, as established by the acts alleged in ¶¶ 52l-52n, 52t-52v, 52y-52ar, 52ax-52ay, 57-61. Under the Sentencing Guidelines, "An individual 'condoned' an offense if the individual knew of the offense and did not take reasonable steps to prevent or terminate the offense." U.S.S.G. § 8A1.1, App. Note 3.

²⁵ https://en.wikipedia.org/wiki/Dennis_Muilenburg.

²⁶ In this statement of facts, all references to the Guidelines are to the 2018 edition applicable here.

²⁷ ECF No. 1 at 1

66. At the very least, Muilenburg was “willfully ignorant” of Boeing’s conspiracy (although the better understanding of the evidence is that he participated in the conspiracy). Under U.S.S.G. 8A1.2, Application Note 3, an individual was “willfully ignorant of the offense” if the individual did not investigate the possible occurrence of unlawful conduct despite knowledge of circumstances that would lead a reasonable person to investigate whether unlawful conduct had occurred.” As an example of willful ignorance, as recounted in paragraphs ¶¶ 52bb-52bc above, Muilenburg did not take any steps to investigate the November 15, 2016 Chats from co-conspirator Boeing Employee-1, despite understanding the chat to be “concerning.” (Attachment A-16 at ¶ 62).

67. As a large, publicly traded corporation, Boeing has the ability to pay a substantial fine. According to one reliable estimate, Boeing has a market capitalization of \$113.83 billion, making it the world’s 131st most valuable company.²⁸

The Pecuniary Loss Caused by Boeing’s Conspiracy

68. Boeing’s conspiracy directly and proximately caused the deaths of 346 passengers and crew on board Lion Air Flight 610 and Ethiopian Airlines Flight 302.²⁹

69. Had Boeing not committed its crime, the FAA AEG would have required Level D differences training for operators of the 737 MAX and would have included information related to MCAS in relevant training materials. As a result, foreign regulators—including Indonesian and Ethiopian authorities—would have issued similar training certifications and instructional materials, having taken their cue from the world’s leading authority on aviation standards, the FAA. And ultimately, foreign operators of the 737 MAX—including the pilots

²⁸ <https://companiesmarketcap.com/boeing/marketcap/>.

²⁹ ECF No. 116 at 15-19.

on Lion Air Flight 610 and Ethiopian Airlines Flight 302—would have received training adequate to respond to the MCAS activation that occurred on both aircraft.³⁰

70. The two airplane crashes were a direct and reasonably foreseeable consequence of Boeing's scheme to defraud federal aviation regulators.³¹

71. Boeing's conspiracy crime and the resulting harm of the two crashes are substantially related enough that the accidents cannot be described as a mere fortuitous result.³²

72. The tragic loss of life that resulted from the two airplane crashes was a direct and reasonably foreseeable consequence of Boeing's conspiracy to defraud the United States.³³

73. Boeing's conspiracy crime resulted in ten or more victims of that particular crime.³⁴

74. Boeing's conspiracy crime involved a foreseeable risk of death. Boeing's employees recognized a general risk that lying to the FAA-AEG in the course of training certification discussions might cause. Clearly, the general risk created by a pilot's lack of training is a potential catastrophic event, like the two crashes that occurred here.³⁵

75. Boeing's conspiracy crime caused horrendous losses to the victims' families, as Boeing has admitted. During a June 18, 2024, Senate hearing on "Boeing's Broken Safety Culture," Boeing's current CEO, Dave Calhoun, told the families: "I would like to apologize

³⁰ ECF No. 116 at 15-16.

³¹ *Id.* at 16.

³² *Id.*

³³ *Id.* at 17.

³⁴ *Id.* at 16.

³⁵ *Id.* at 17.

on behalf of all of our Boeing associates spread throughout the world, past, and present, for your losses. They are gut-wrenching. And I apologize for the grief that we have caused And so, again, I'm sorry.”³⁶

76. The “gut-wrenching” losses that Boeing’s conspiracy crime caused to the victims’ families can be quantified so as to measure the pecuniary losses Boeing caused. For example, as a reasonable and conservative estimate, it would be possible to rely on a 2010 article by Professor Matt DeLisi and his colleagues, which calculated “cost estimates” for the crime of murder (the most intentional form of crimes causing death).³⁷ They concluded that the cost, in 2008 U.S. dollars, was \$4,712,769.³⁸ Translated into 2018 dollars, the cost of a homicide would be \$5,496,483. The same “cost estimate” for a death caused by an intentional murder would, by definition, equal the cost estimate for a death directly and proximately caused by an intentional conspiracy to defraud the FAA. Multiplied across 346 crime victims, the total loss to victims from Boeing’s crime in 2018 dollars is \$1,901,783,118. There are also other reasonable ways of calculating the loss that Boeing’s conspiracy crime caused to the victims’ families. In addition to the pecuniary losses described in this paragraph, Boeing’s conspiracy crime also imposed very significant non-pecuniary losses on the victims and the victims’ families, such as pain and suffering and emotional distress.

³⁶ <https://www.hsgac.senate.gov/subcommittees/investigations/hearings/boeings-broken-safety-culture-ceo-dave-calhoun-testifies>

³⁷ See Matt DeLisi et al., *Murder by Numbers: Monetary Costs Imposed by a Sample of Homicide Offenders*, 21 *J. Forensic Psychiatry & Psych.* 501, 506 (2010).

³⁸ *Id.* at 506 tbl. 1

77. Boeing's conspiracy crime produced two crashes in a few months of two new Boeing 737 MAX aircraft.³⁹ Those two crashes, in turn, directly and proximately produced worldwide grounding orders by domestic and foreign regulatory authorities.⁴⁰

78. Shortly after Boeing disclosed to the FAA information showing that the traces from the Lion Air crash and the Ethiopian Airlines crash showed striking similarities, the FAA grounded the 737 MAX fleet in the United States.⁴¹

79. After the FAA grounded the 737 MAX, foreign grounding orders swiftly followed (in those countries which had not already grounded the MAX). As Boeing has admitted, "FAA is pretty powerful and most countries defer to what the FAA does[.]"⁴² Boeing's crime was thus a but-for cause of these grounding orders.

80. That the FAA would ground the MAX was a foreseeable consequence of the two crashes. The FAA Administrator promotes the safe flight of civil aircraft by, among other things, prescribing minimum standards for practices, methods, and procedures the Administrator finds necessary for safety in air commerce.⁴³ The FAA Administrator is authorized to take necessary and appropriate actions to carry out his aviation safety duties and powers under part A ("Air Commerce and Safety") of subtitle VII of Title 49 of the United States Code, including conducting investigations, issuing orders, and prescribing regulations, standards, and procedures.⁴⁴ When the Administrator determines that an

³⁹ ECF No. 116 at 16-19.

⁴⁰ See House Transportation Committee Report, *supra*, at 219-21.

⁴¹ *Id.* at 220-21.

⁴² ECF No. 116 at 17 (citing sources).

⁴³ 49 U.S.C. § 44701(a)(5).

⁴⁴ 49 U.S.C. § 40113(a).

emergency exists related to safety in air commerce and requires immediate action, the Administrator may issue immediately effective orders to meet the emergency.⁴⁵

81. The facts recounted in the previous paragraph about FAA grounding authority were well known to Boeing. Indeed, after briefing the FAA about the similarities between the Lion Air and Ethiopian Airlines crashes, Boeing asked the FAA “what are you going to do?”⁴⁶ This demonstrates that Boeing knew that grounding was a possible outcome of the two crashes.

82. Groundings from the 737 MAX crashes directly and foreseeably produced losses to Boeing’s aircraft customers. Boeing reported 737 MAX customer loss considerations of \$9,257,000,000.⁴⁷ In 2019 customer loss considerations was an estimated \$8.259 billion, net of \$500 million paid by insurance companies. The insurance companies lost \$500 million as a result of these payments. In 2020, customer loss considerations were an estimated \$498 million. 737 MAX “customer considerations” reflect the estimated “concessions and other considerations to customers for disruptions related to the 737 MAX grounding and associated delivery delays.”⁴⁸

Boeing’s Breaches Its DPA Obligations

83. Boeing entered into a DPA with the Justice Department to resolve a criminal charge of conspiracy on around January 7, 2021. During the three-year term of its DPA,

⁴⁵ 49 U.S.C. 46105(c).

⁴⁶ House Transportation Comm. Report, *supra*, at 220.

⁴⁷ See Boeing Form 10-K available at <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000012927/31b93a2e-c565-4279-9806-69750eaa5361.pdf> via <https://investors.boeing.com/investors/reports/>.

⁴⁸ Boeing to Recognize Charge and Increased Costs in Second Quarter Due to 737 MAX Grounding, July 18, 2019, available at <https://boeing.mediaroom.com/2019-07-18-Boeing-to-Recognize-Charge-and-Increased-Costs-in-Second-Quarter-Due-to-737-MAX-Grounding>

Boeing took some steps to enhance the independence, capability, and effectiveness of its compliance program. But despite these steps, Boeing failed to sufficiently extend its anti-fraud ethics and compliance program over its quality and manufacturing process before the end of the DPA term. As a result, the Department determined that Boeing's anti-fraud compliance program still has significant gaps. *See Proposed Plea Agreement, Breach Determination* (ECF No. 221-1, p. A-1-3, at ¶ 5.)

84. Boeing violated Paragraphs 21 and 22 and Attachment C of the DPA. Relevant considerations in arriving at that determination and making that declaration include the following:

- Boeing failed to fully satisfy the requirement to “create and foster a culture of ethics and compliance with the law in its day-to-day operations,” Attachment C ¶ 1, by failing to mitigate known manufacturing and quality risks;

- Boeing failed to fully satisfy the requirement to implement “compliance policies and procedures designed to reduce the prospect of violations of U.S. fraud laws and the Company’s compliance code,” Attachment C ¶ 3, by failing to design a compliance and ethics program that included sufficient anti-fraud oversight of Boeing’s quality and safety processes;

- Boeing failed to fully satisfy the requirement to implement “compliance policies and procedures designed to reduce the prospect of violations of U.S. fraud laws and the Company’s compliance code,” Attachment C ¶ 3, by failing to implement sufficient controls concerning the risk that Boeing’s airworthiness certifications to the FAA could be incomplete, inaccurate, false and/or fraudulent;

- Boeing failed to fully satisfy the requirement to implement “compliance policies and procedures designed to reduce the prospect of violations of U.S. fraud laws and the Company’s compliance code,” Attachment C ¶ 3, by failing to implement sufficient controls concerning the risk of incomplete, inaccurate, false and/or fraudulent statements in Boeing’s manufacturing records; and

- Boeing failed to fully satisfy the requirement to appropriately develop and adjust “compliance policies and procedures on the basis of a periodic risk assessment addressing the individual circumstances of the Company,” Attachment C ¶ 4, and to review and update such policies “as appropriate to

ensure their continued effectiveness,” Attachment C ¶ 5, in light of known manufacturing and quality risks, and the attendant risks of incomplete, inaccurate, false, and/or fraudulent statements to the FAA.

Proposed Plea Agreement, Breach Determination (ECF No. 221-1, p. A-1-3, at ¶ 6).

85. Boeing’s breaches of the DPA recounted in the previous two paragraphs came during a three-year period of time when it was being monitored by the Justice Department, including monitoring of quarterly reports being provided by Boeing. DPA, Enhanced Reporting Requirements, at ¶ 12. The Justice Department’s monitoring was insufficient to detect Boeing’s numerous and substantial breaches of the DPA.

* * *

The families believe that they can establish each and every one of the foregoing facts. The families request that, if the parties dispute any of these facts, that they specifically identify the fact disputed, the basis for the dispute, and evidence supporting that basis. The families’ counsel are also available to meet-and-confer, on reasonable notice, with the parties to attempt to resolve any factual disputes that may arise and to attempt to narrow the range of any disagreement between the parties.