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 IN THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF ALASKA

In re Crash of Aircraft N93PC)	No. 3:15-cv-0112-HRH
)	[Consolidated with
on July 7, 2013, at Soldotna, Alaska)	No. 3:15-cv-0113-HRH and
_____)	No. 3:15-cv-0115-HRH]

ORDER

Plaintiffs' Motion in Limine No. 3

Plaintiffs move to exclude reports and studies issued by the NTSB.¹ This motion is opposed.² Oral argument was requested but is not deemed necessary.

Background

On July 7, 2013, a deHavilland DHC-3 "Otter" airplane operated by Rediske Air, Inc. and piloted by Walter Rediske crashed shortly after takeoff from the Soldotna Airport. Rediske and all of the passengers on board were killed in the crash. Plaintiffs, which are the estates of the passengers and Rediske, assert wrongful death, negligence, strict product liability, and breach of warranty claims against Honeywell.

¹Docket No. 424.

²Docket No. 478.

The National Transportation Safety Board (“NTSB”) conducted an investigation of the accident. The NTSB issued a Final Report,³ a factual report,⁴ and three separate studies, a video study,⁵ a weight and balance study,⁶ and a kinematics study.⁷ The parties agree⁸ that the Final Report is inadmissible but that the factual report is admissible.⁹ The parties, however, disagree as to the admissibility of the three NTSB studies. Plaintiffs argue that the studies are inadmissible. Honeywell argues that the studies are admissible.

The weight and balance study is a 6-page study which was prepared by Clinton R. Crookshanks, an aerospace engineer.¹⁰ The study begins with the statement that “[t]he actual weight and balance of the airplane during the accident flight cannot be accurately determined with the limited available factual data. However, several possible scenarios can be calculated

³Exhibit 6, Honeywell’s Opposition [etc.], Docket No. 478.

⁴Exhibit A, Plaintiffs’ Motion in Limine [etc.], Docket No. 424.

⁵Exhibit B, Plaintiffs’ Motion in Limine [etc.], Docket No. 424.

⁶Exhibit C, Plaintiffs’ Motion in Limine [etc.], Docket No. 424.

⁷Exhibit D, Plaintiffs’ Motion in Limine [etc.], Docket No. 424.

⁸Honeywell contends that parts of the Final Report could be admissible but it “does not oppose exclusion of the full Final Report. . . .” Honeywell’s Opposition [etc.] at 6, Docket No. 478.

⁹Plaintiff’s Reply [etc.] at 2, Docket No. 492.

¹⁰Exhibit C at 7, Plaintiffs’ Motion in Limine to Exclude the NTSB Final Report [etc.], Docket No. 424.

utilizing the known factual information along with logical, documented assumptions.”¹¹ The study then proceeds to calculate the weight of the aircraft by considering the empty weight of the aircraft, the weight of the cargo and baggage on board, the weight of the passengers and pilot, and the weight of fuel on board.¹² The study next sets out six possible weight and balance scenarios for the accident airplane, concluding that Scenario 6 “more closely approximates the actual weight and balance of the airplane during the accident flight.”¹³ The study concludes that

[b]ased on the calculated CG locations, some general facts can be deduced. Any amount of fuel more than the required minimum in the aft tank prior to the first flight would move the CG location further aft for all scenarios since the arm is behind the CG. Further reduction of fuel in the forward tank or a starting value less than full would move the CG location further aft since the weight would decrease and the arm is forward of the CG location for all scenarios. Errors in the assumed baggage weights for those bags included as part of the total recovered weight of 187 pounds and placed at row 2 or behind would have a negligible effect on the CG location but would not move the CG location forward since the arms are all behind the calculated CG locations for all scenarios. Of the three unrecovered bags, one would likely have been located in row 1 which would move the CG location forward for all scenarios but the other two were likely located at rows 3 and 4 which would move the CG location aft for all scenarios. Finally, any increase in the weight of cargo would move the CG location further aft for all scenarios since the arm is aft of the calculated CG locations.

¹¹Id. at 1-2.

¹²Id. at 2-4.

¹³Id. at 4-6.

It is possible that the arm and moment for the aft tank could be in error. All of the calculations done for the STC compliance assumed all three cells of the extended range aft tank were full and the airplane was in a level attitude. The fuel distribution between the three cells would likely be different with a partially full tank and the airplane in a tail-down attitude. The takeoff acceleration may also cause the fuel in the aft tank to move towards the aft-most cell. To gauge this effect, scenario 6 was recalculated using the assumption that the partial aft tank fuel (14.5 gallons) was in the aft-most cell at the arm of 228.0 inches. The resulting CG location moved further aft by 0.35 inches.^[14]

The video study is an 8-page study completed by NTSB employee, Dan T. Horak.¹⁵

“The goal of this study was to estimate the trajectory and speed of the DHC-3 airplane based on information in a video recorded on an iPhone 5 camera.”¹⁶ The NTSB explained that

[t]he analysis of this video posed unique challenges because the camera was hand-held as opposed to being fixed to the airplane. Consequently, it became necessary to first estimate the time-varying orientation of the camera with respect to the airplane and then, with the camera fixed to the airplane and with that orientation, to estimate the location and orientation of the airplane with respect to the ground.^[17]

The video study’s conclusions were as follows:

Video acquired with an iPhone camera hand-held by a passenger in a DHC-3T airplane that crashed shortly after

¹⁴Id. at 7.

¹⁵Exhibit B at 1, Plaintiffs’ Motion in Limine to Exclude the NTSB Final Report [etc.], Docket No. 424.

¹⁶Id.

¹⁷Id. at 2.

takeoff was used for estimating the trajectory and orientation of the airplane. That data was then used for estimating velocities, angular rates and angle of attack of the airplane.

The analysis revealed that shortly after takeoff, flight speed started decreasing rapidly and angle of attack started increasing rapidly. Approximately 11 seconds after takeoff, flight speed and angle of attack reached levels corresponding to stall. The airplane developed a large right-wing-down roll angle and impacted ground several seconds later.^[18]

The kinematics study was authored by NTSB employee, Dennis Crider.¹⁹ The purpose of the kinematics study was “to estimate the weight and center of gravity (c.g.) for the accident flight from the motion of the aircraft described in the video study as an additional method to that used in the ‘Weight and Balance Study’.”²⁰ The study concluded that

[i]t was not possible to estimate the weight of the accident aircraft utilizing this method due to the high sensitivity of the solution to wind speed, which was not known precisely. Derived center of gravity however was not very sensitive to weight. With the pilot applying full pitch down yoke with 1.91 deg stabilizer, the center of gravity required for the motion, subject to some uncertainty as outlined above, was about 52.4% mean aerodynamic chord (just past 161 inches) for both possible weights examined. The center of gravity was significantly aft of the 152.2 inch (41% mean aerodynamic chord) aft limit for the aircraft.^[21]

¹⁸Id. at 8.

¹⁹Exhibit D at 1, Plaintiffs’ Motion in Limine to Exclude the NTSB Final Report [etc.], Docket No. 424.

²⁰Id. (emphasis added).

²¹Id. at 13.

The issue before the court is whether these three NTSB studies are admissible.

Discussion

The “NTSB is a uniquely independent federal agency responsible for investigating airplane accidents, determining the probable cause of accidents, and making recommendations to help protect against future accidents.” Chiron Corp. and PerSeptive Biosystems, Inc. v. National Transp. Safety Bd., 198 F.3d 935, 937 (C.A.D.C. 1999). “[A]n NTSB investigation is a ‘fact-finding proceeding[] with no formal issues and no adverse parties. [It is] . . . not conducted for the purpose of determining the rights or liabilities of any person.’” Id. at 938 (quoting 49 C.F.R. § 831.4 (1998)). “[F]ederal regulations explain that the NTSB creates two different types of reports: ‘Board accident reports’ and ‘factual accident reports.’” Escobar v. Nevada Helicopter Leasing LLC, Case No. 13-00598 HG-WRP, 2020 WL 104672, at *3 (D. Hawai’i 2020) (quoting 49 C.F.R. § 835.2). “No part of a report of the Board, related to an accident or an investigation of an accident, may be admitted into evidence or used in a civil action for damages resulting from a matter mentioned in the report.” 49 U.S.C. § 1154(b). A “Board accident report means the report containing the Board’s determinations, including the probable cause of an accident, issued either as a narrative report or in a computer format (‘briefs’ of accidents).” 49 C.F.R. § 835.2. However, “Factual Accident Reports from the NTSB are admissible at trial.” Escobar, 2020 WL 104672, at *4. A “Factual accident report means the report containing the results of the investigator’s investigation of the accident.” 49 C.F.R. § 835.2.

The regulations do not define an NTSB “study.” However, as plaintiffs point out, the regulations that expressly deal with NTSB employees’ testimony in civil litigation provide that employees may not testify about “safety recommendations, safety studies, safety proposals, safety accomplishments, reports labeled studies, and analysis reports, as they contain staff analysis and/or Board conclusions.” 49 C.F.R. § 835.3(c) (emphasis added). But, as Honeywell is quick to point out, 49 C.F.R. § 835.3(c) applies to testimony provided by NTSB employees at trial; it does not expressly provide that NTSB reports which are labeled studies are themselves inadmissible. See In re Jacoby Airplane Crash Litig., Case No. 99–6073(HAA), 2007 WL 2746833, at *10 (D.N.J. 2007) (finding similar argument “unpersuasive because § 835.3 clearly regulates testimony by current Board employees. The regulation does not expand upon § 1154(b)’s prohibition on which documents are statutorily proscribed as admissible evidence.”).

What is significant about § 835.3(c), however, is not that it pertains to testimony from NTSB employees at trial, but rather that the NTSB has explained that reports labeled studies, such as the three studies at issue here, “contain staff analysis and/or Board conclusions.” 49 C.F.R. § 835.3(c). As the NTSB explained in its Notice of Proposed Rulemaking in 1990 when § 835.3(c) was amended to “preclude interpretation of § 835.3 which would permit employees to testify as experts or give any opinion testimony,”

[t]he proposed rule change is also consistent with the nondiscoverable status courts have accorded “Analysis Reports” prepared by NTSB investigators. In order to assist the supervisory personnel and Board Members in arriving at the determina-

tion of probable cause, NTSB investigators prepare internal, analytical reports which contain the investigators' review and analysis of publicly available facts, discussion of the relevance and significance of the facts to the accident scenario, development of various theories which may explain the probable cause of the accident and the elimination of those theories that the investigators believe are not supported by the evidence. Analysis reports reflect the sifting and selective discussion of the facts, and to a greater extent, the investigators' personal weighing and analysis of the evidence culminating in their subjective views and reasoning concerning the probable cause of the accident. The analytical reports embody the links in the proposed sequence of causal events, including the elimination of possible causal factors. In short, these nondiscoverable analytical records do not merely contain the investigators' ultimate opinions about the cause of the accident but, instead, include the intermediate opinions leading to a recommended determination of cause. Courts have consistently held that the analysis reports cannot be discovered.^[22]

The three studies at issue primarily contain the investigators' opinions and "reflect the sifting and selective discussion of the facts, and to a greater extent, the investigators' personal weighing and analysis of the evidence culminating in their subjective views and reasoning concerning the probable cause of the accident."²³ The studies, when read together, walk right up to the Board's conclusion as to probable cause. Thus, the studies fall far closer to the definition of a Board report in Section 835.2 than they do a Factual report. As such, the studies' admissibility is barred by 49 U.S.C. § 1154(b).

²²Federal Register, July 30, 1990, Exhibit A at 3, Plaintiffs Reply [etc.], Docket No. 492.

²³Id.

Conclusion

Plaintiffs' motion in limine No. 3 is granted in part and denied in part. To the extent that plaintiffs move to exclude the NTSB factual report, the motion is denied. The motion is otherwise granted.

DATED at Anchorage, Alaska, this 4th day of August, 2021.

/s/ H. Russel Holland
United States District Judge