UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION

AUBREY ANDERS, as Administrator of the Estate of Michael R. Anders,

Plaintiff,

v.

Case No: 6:15-cv-1115-Orl-28GJK (Consolidated)

UNITED STATES OF AMERICA,

Defendant.

DARREL JOSEPH, as Administrator of the Estate of Charisse M. Peoples,

Plaintiff,

v.

UNITED STATES OF AMERICA,

Defendant.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

On January 4, 2013, a 1957 Beechcraft Bonanza H35 airplane, U.S. registry N375B ("N375B"), crashed while approaching Runway 29 at the Flagler County Airport in northeast Florida for an emergency landing. At the time, N375B was owned and piloted by Michael Anders. Also on board were two passengers—Duane Shaw, who was a commercial pilot, and Charisse M. Peoples. All three died in the crash.

Anders is survived by two daughters, and Peoples is survived by two sons. The estates of Anders and Peoples sued the United States ("the Government") under the

Federal Tort Claims Act (FTCA),[1] claiming that the negligence of Federal Aviation Administration ("FAA") air traffic controllers was the proximate cause of decedents' deaths. The Court consolidated the lawsuits,[2] which were then tried for seven days before the Court sitting without a jury. After the parties submitted post-trial memoranda,[3] the Court heard closing arguments. (See Mins., Doc. 177). Because the evidence presented at trial failed to establish that controller negligence caused decedents' deaths, Plaintiffs' claims fail. The findings of fact and conclusions of law required by Federal Rule of Civil Procedure 52 are set forth below.

I. FACTS

Vacation Plans and Preparations

In 2008, Anders purchased N375B, a single-engine plane with retractable landing gear, for his personal use. (Stipulated Facts[4] ¶ 1). He held a pilot's license for single-engine land aircraft and an instrument rating. (Id. ¶ 7). At some point in 2012, Anders made plans to fly Peoples and Shaw to the Caribbean for the Christmas and New Year's holidays. (Id. ¶ 8). As the trip approached, Anders could tell that N375B's engine was not

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[1] 28 U.S.C. §§ 1346(b) & 2674.

[2] The suit filed by the administrator of Peoples' estate, Darrel Joseph, was initially Case No. 6:15-cv-1230-28GJK. As stated in the Order consolidating the cases, all filings since consolidation have been docketed only in the Anders case, No. 6:15-cv-1115-28GJK.

[3] These post-trial filings are: the Government's 56-page Memorandum in Support of *Ore Tenus* Motion for Judgment Under Fed. R. Civ. P. 52(c), and Argument on the Merits of the Case Based on All the Evidence (Doc. 169); Plaintiffs' 100-page Amended Opposition to Defendant's Rule 52(c) Motion, Closing Argument on the Merits with Proposed Findings of Fact and Conclusions of Law and Memorandum (Doc. 172); Plaintiffs' 44-page Response to Defendant's Rule 52(c) Brief and Argument on the Merits (Doc. 173); and the Government's 47-page Rebuttal Argument on Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 52(c), and on the Merits of the Case Based on All the Evidence (Doc. 174).

[4] Citations to Stipulated Facts are to the Stipulated Facts in the parties' joint Pretrial Statement (Doc. 101 at 17–20).

running as it should. Concerned, Anders asked Barry Sanders, an FAA-certified airframe and powerplant mechanic in Knoxville, Tennessee, to assess the problem.

Sanders checked the compression in N375B's engine and confirmed Anders' belief that the engine was running poorly. (Sanders Dep., Doc. 141, at 19).[5] Sanders determined that two of the engine's six cylinders—the number one cylinder and the number four cylinder—were cracked. (Id. at 16, 25). When Sanders relayed this information to Anders, Anders requested that Sanders replace the defective cylinders with "serviceable" cylinders—used cylinders that are less expensive than new cylinders but nevertheless meet FAA standards. (Id. at 20–21). Sanders replaced the cylinders as requested. (Id. at 25). Sanders also installed some gear indicator lights, replaced a pilot side window, and cleared out a plugged vent that was preventing fuel from feeding properly in one of N375B's wingtip fuel tanks.[6] (Id. at 16, 32). In some of this work, Sanders was assisted by Quentin Elkins, also a certified airframe and powerplant mechanic. (Id. at 8 & 25; Elkins Dep., Doc. 154,[7] at 14). Among other things, Elkins corrected under-torqued spark plugs and wires that Anders had installed. (Elkins Dep. at 27).

After that work was completed, Anders asked whether Sanders could perform an annual inspection on N375B. (Sanders Dep. at 35). When Sanders told Anders that he could not do the inspection immediately but could schedule it for a later time, Anders

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[5] The videotaped deposition of Sanders was played during the trial, (see Trial. Tr. Day 4 (a.m.), Doc. 138, at 2–3), and the deposition transcript (Doc. 141) was then filed in the record.

[6] N375B did not have any wingtip fuel tanks when it was manufactured, but at the time of the crash it had two 15-gallon wingtip tanks. (Stipulated Facts ¶ 5).

[7] The videotaped deposition of Elkins was played during the trial, (see Trial Tr. Day 6 (p.m.), Doc. 157, at 66), and the deposition transcript (Doc. 154) was then filed in the record.

responded that he could not wait and that he would get the inspection done in the Caribbean or somewhere else. (Id. at 36). Sanders and Elkins double-checked the repair work they performed on the plane, but neither of them conducted an inspection of N375B or did any flight tests. (Sanders Dep. at 18–19 & 34; Elkins Dep. at 30–31).

Trip to Caribbean

On December 22, 2012, N375B—with Anders, Peoples, and Shaw onboard—flew from Ft. Pierce, Florida, to St. Croix, U.S. Virgin Islands, refueling in the Grand Turks and Caicos along the way. (Stipulated Facts ¶ 9). On January 3, 2013, after spending the holidays in the Caribbean, the trio began their trip home. (Id. ¶ 12). They spent the night in Stella Maris, the Bahamas, and then flew to Ft. Pierce, Florida, on the morning of January 4. (Id.).

Ft. Pierce

Chris Sullivan, a line service technician at the St. Lucie County International Airport in Ft. Pierce, greeted Anders when N375B arrived on January 4. As Anders and his passengers entered the U.S. Customs building there, Sullivan noticed that N375B was weathered—with chipped paint on the leading edge of the wing—and that the aircraft was very lopsided, leaning to the left. (Trial Tr. Day 7 (a.m.), Doc. 159, at 82 & 98). Anders requested refueling of the aircraft. (Id. at 82). Sullivan was surprised when Anders asked him to fill the main fuel tanks and the left wingtip tank, because filling the left wingtip tank would create an even greater imbalance. (Id. at 83). When Sullivan questioned Anders' instructions, Anders changed his mind and told Sullivan to fill the right tip tank all the way and fill the left tip tank only half way. (Id.). Eventually, Sullivan refueled the aircraft as requested, resulting in a partial correction of the imbalance. (Id. at 98–99 & 107).

As Sullivan was preparing to tow N375B for fueling, he noticed oil on the nose strut. (Id. at 84). When he removed the strap used for towing, Sullivan saw that "[i]t had a lot [of] oil on it, dark." (Id. at 85). Oil was dripping from a vent on the side of the aircraft, which was not unusual, but Sullivan was concerned about the leak onto the strut and mentioned it to Anders. (Id. at 85, 91). Anders responded that he was aware of it, and he and his pilot-passenger, Shaw, joked that "[i]f there's no oil under them, there's none in them." (Id. at 91–92). Anders did not ask Sullivan to add oil to N375B. (Id. at 92–93).

Sullivan also heard Anders mention something about a fuel pump issue to Shaw. (Id. at 96). Sullivan interjected to Anders that a mechanic was available at the airport if they wanted the problem checked. (Id. at 96–97). Anders responded that he was "aware of any issues with the aircraft" and that "he'd taken care of it." (Id.).

The Flight from Ft. Pierce

At approximately 1:11 p.m. Eastern Standard Time[8] on January 4, N375B took off from Ft. Pierce, flying north toward its intended destination of Knoxville, Tennessee. (Stipulated Facts ¶ 13). Although Anders was an instrument-rated pilot, he did not file an instrument flight plan before departing. Instead of flying under instrument flight rules ("IFR"), which govern flight in instrument meteorological conditions ("IMC"), he decided to fly under visual flight rules ("VFR"). (See Air Traffic Control Manual (Manual), Pls.' Ex. 108A, at Pilot/Controller Glossary PCG V-3 & PCG I-4).[9] IMC are meteorological

[8] The text of this Order refers to the timing of events using local time—Eastern Standard Time (EST). Many of the exhibits, including the transcripts of Anders' communications with controllers, refer to "Zulu" or "coordinated universal time." On the date of the accident, 1:00 p.m. EST equated to 18:00 Zulu, and 2:00 p.m. EST equated to 19:00 Zulu.

[9] The terms "IMC" and "IFR conditions" are often used interchangeably. (See Trial Tr. Day 1 (a.m.), Doc. 122, at 94 (Fagras Test.)).

conditions in which the visibility is less than three miles and the cloud ceiling is less than 1000 feet. (Trial Tr. Day 1 (a.m.), Doc. 122, at 87, 93–94 (Fagras Test.); see also Manual at Pilot/Controller Glossary PCG I-4 (defining IMC as "[m]eteorogical conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions [VMC]")). VFR provides a method for pilots to fly in VMC using visible landmarks for navigation, and VFR pilots navigate on their own and can make flight decisions without permission of an air traffic controller. Pilots flying VFR are not permitted to fly in IMC unless they are instrument-rated pilots and first obtain an IFR clearance for that purpose. (See Trial Tr. Day 1 (a.m.), Doc. 122, at 87 (Fagras Test.)).

Just after departing Ft. Pierce, at 1:17 p.m., Anders contacted an air traffic control facility in Miami and requested "flight following" services. (Stipulated Facts ¶ 14; Aircraft Accident Package, Pls.' Ex. 14A, at Bates US000081–82). With this request, Anders was asking that the controllers watch him as he traveled across the southeastern United States, meaning that controllers would provide him with information regarding alerts and traffic advisories. (See Trial Tr. Day 1 (a.m.), Doc. 122, at 66–67 (Fagras Test.)). It is typical that pilots receiving flight following services will maintain contact with controllers as they travel and will notify the controllers before changing altitude. But VFR pilots remain responsible for their own navigation.

Daytona TRACON

About thirty minutes after leaving Ft. Pierce, N375B neared the airspace covered by the terminal radar approach control (TRACON) facility located at the Daytona Beach International Airport (the Daytona airport). The controllers working in the Daytona airport TRACON were responsible for various sectors of airspace. Those directly involved with

N375B on January 4, 2013, were Lance Palmer in the "Mateo" position, which covers aircraft flying at an altitude between 4000 and 11,000 feet, (see Trial Tr. Day 2 (a.m.), Doc. 126, at 95 (Palmer Test.)); Mark Hill, who was responsible for the North Arrival sector, which covers the northern portion of the Daytona TRACON's airspace at altitudes of 3500 feet and below, (see Trial Tr. Day 2 (p.m.), Doc. 131, at 95 (Hill Test.)); and Mike Raulerson, the front line manager. Also among those on duty in the TRACON that day were controllers Travis Hans and Joseph Gambino. All were veteran controllers.

Palmer was trained as a controller while serving in the United States Air Force. (Trial Tr. Day 2 (a.m.), Doc. 126, at 66). After completion of his training, he spent nine years as an Air Force controller. (Id. at 66–67). Upon leaving the Air Force, he went to work as a controller for the Department of Defense before going to work for the FAA in the same capacity. (Id. at 67). He has worked at the Daytona airport since 2005. (Id.). By the time of trial, Palmer had been a controller for over 28 years and was also an on-the-job-training instructor at the Daytona TRACON. (Id. at 69–70). While in the Air Force, Palmer conducted more than 1000 airport surveillance radar approaches (ASRs or surveillance approaches)—helping pilots land using only ground-based radar to provide course guidance and line the aircraft up with the extended centerline of a runway—and he continued to conduct surveillance approaches during his FAA tenure. (Id. at 68; see also Trial Tr. Day 1 (a.m.), Doc. 122, at 45 (Fagras Test.) (explaining radar approaches)).

Hill was trained as a controller while serving in the United States Marine Corps; he served four of his eight years in the Marine Corps as a controller. (Trial Tr. Day 2 (p.m.), Doc. 131, at 88). While in the Marine Corps, Hill directed nearly 10,000 surveillance approaches. (Id. at 89). Upon being honorably discharged from the Marine Corps in 1986,

Hill joined the FAA as a controller. (Id. at 89–90). In 1999 he was assigned to the Daytona airport, where he worked until his retirement in June 2016. (Id. at 90–91). Like Palmer, he was an on-the-job-training instructor at the Daytona TRACON. (Id. at 90).

Raulerson became an FAA controller in 1991 and worked at the Daytona airport from 1999 until his retirement in 2014. (Raulerson Dep., Doc. 149, at 23, 26–27).[10] For the last seven years of his career, Raulerson was a front line manager, meaning that he supervised other controllers. (Id. at 27).

The roles of Hans and Gambino in dealing with N375B were limited. Hans was a veteran controller but was the Developmental Mateo Arrival Coordinator working under Palmer's supervision when N375B entered Daytona's airspace. He was trained as a controller in 2003 while in the United States Air Force and has worked in that capacity ever since. (See National Transportation Safety Board (NTSB) Air Traffic Control Group Factual Report, Pls.' Ex. 20, at Bates US000030). Gambino was a controller with more than twenty-two years of experience with the FAA. (Id. at Bates US000034). On the day of the accident, he was the Coordinator Controller. (Id.). In that role, he assisted Raulerson and coordinated with the tower at the Flagler County Airport in assisting N375B. (See id. at Bates 000034–000035).

Initial Communications

At 1:49:34 p.m. on January 4, Anders made contact with Hans as N375B entered the Daytona TRACON's airspace from the south. (Mateo Tr., Gov't's Ex. 93, at 2; Mateo Radar Replay and Audio ("Mateo Audio"), Gov't's Ex. 76, at 1849:34). About eight minutes

[10] The videotaped deposition of Raulerson was played during the trial, (see Trial. Tr. Day 5 (a.m.), Doc. 145, at 120), and the deposition transcript (Doc. 149) was then filed in the record.

later, N375B began to enter a layer of clouds, and Anders asked Hans for clearance to climb to 6500 feet, saying he wanted to "climb out of this. I'm getting in the soup here." (Mateo Tr. at 6; Mateo Audio at 1857:21). Palmer, knowing from earlier pilot reports that 6500 feet was not high enough to get out of the clouds, responded, "The tops are reported at 7000 so climb uh at or above 7000 report and uh maintain VFR." (Mateo Tr. at 6; Mateo Audio at 1857:31). At 1:58:51, Palmer checked in to see if Anders was still able to fly VFR, and Anders answered, "Yeah we're just safe here now, we got sunlight." (Mateo Tr. at 7; Mateo Audio at 1858:51–1859:05). A couple minutes later, at 2:01:30, Hans asked Anders if he was "comfortable climbing to 7500" feet. (Mateo Tr. at 8; Mateo Audio at 1901:30). Anders agreed: "Roger I got to get out of the top of the soup here seventy five is clear looks like about seven two for the bases [sic]."[11] (Mateo Tr. at 8; Mateo Audio at 1901:33). Hans then instructed Anders to "maintain VFR 7500" and to report if he needed further changes. (Mateo Tr. at 8; Mateo Audio at 1901:38). At 2:01:42, Anders thanked the controllers for their help. (Mateo Tr. at 8; Mateo Audio at 1901:42).

Engine Problem

The Daytona controllers did not hear from Anders again for over five minutes. But at 2:07:01, Anders announced that he had a vibration in the propeller and needed "some help here." (Mateo Tr. at 10; Mateo Audio at 1907:01). At that time, N375B had just flown to the west of both the Daytona airport and the Ormond Beach Municipal Airport (the Ormond airport) and was nearing the Flagler County Airport[12] (the Flagler airport) at an

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[11] Anders apparently misspoke and was actually reporting the tops of the clouds—rather than the bases of the clouds—at 7200 feet.

[12] On the date of the crash, this airport was called Flagler County Airport (identifier XFL), but in 2016 it was renamed Flagler Executive Airport (identifier FIN). (See Trial Tr. Day 3 (p.m.), Doc. 136, at 70 (Seiger Test.); Trial Tr. Day 1 (a.m.), Doc. 122, at 40 (Fagras

altitude of 7600 feet and a groundspeed of 142 knots (163.4 miles per hour). (See NTSB Air Traffic Control Factual Report, Pls.' Ex. 20, at Bates US000024; STARS File, Pls.' Ex. 58, at 1).[13]

Palmer considered the situation an emergency, immediately terminated Hans's training and responsibility at the Mateo position, and promptly responded by advising Anders that "the closest airport"—referring to the Flagler airport—was almost straight ahead ("twelve to one o'clock") five miles away and asked Anders if he was "IFR capable and equipped." (Mateo Tr. at 10; Mateo Audio at 1907:09; Trial Tr. Day 2 (a.m.), Doc. 126, at 114). At 2:07:19, Anders reported to Palmer, "I'm IFR we're just we're getting a little vibration we've got an oil pressure problem we're going to have to drop quickly here." (Mateo Tr. at 10; Mateo Audio at 1907:19). Without delay, Palmer responded to Anders' request and cleared him to the Flagler airport via radar vectors, telling him to "descend and maintain 2000 on [his] present heading." (Mateo Tr. at 10; Mateo Audio at 1907:23). In doing so, Palmer was providing Anders with the "IFR clearance" necessary to allow Anders—to that point conducting the flight as a VFR flight—to descend through the cloud layer. (Trial Tr. Day 2 (a.m.), Doc. 126, at 22–23 (Fagras Test.); id. at 116 (Palmer Test.)).

Test.)).

[13] The STARS File (Pls.' Ex. 58) lists N375B's position, altitude, and speed during the time of the events at issue. STARS stands for "Standard Terminal Automation Replacement System." (See Manual, Pls.' Ex. 108A, at 1-2-6). In their Pretrial Statement, the parties stipulated that "N375B's radar positions were recorded by an . . . antenna system and were documented by FAA as . . . STARS data," and "[t]he parties agree that the . . . STARS data . . . are authentic and require no foundation." (Stipulated Facts ¶ 15). There is also other evidence of altitude and speed in the record, including the radar replays and Anders' reports to controllers of his altitude. Because N375B was equipped with a "Mode C" transponder, the controllers could see the plane's altitude and speed on their radarscopes, (see Trial Tr. Day 1 (a.m.), Doc. 122, at 32 (Fagras Test.); see also Mateo and North Audio, Gov't Exs. 77 & 76)), though those reported values sometimes differ from the STARS data.

Anders acknowledged Palmer's response and thanked him for his help. (Mateo Tr. at 11; Mateo Audio at 1907:29).

When Anders reported the propeller vibration, Palmer informed Raulerson, the front line manager, that he had an emergency and needed help at his radarscope. (Trial Tr. Day 2 (p.m.), Doc. 131, at 10 (Palmer Test.); id. at 98 (Hill Test.); Raulerson Dep., Doc. 149, at 81–82). Raulerson then went to the Mateo position, where he listened to the conversation between Palmer and Anders. (Trial Tr. Day 2 (p.m.), Doc. 131, at 11 (Palmer Test.); Raulerson Dep. at 81–82). Palmer then asked Anders how many people were on board, how much fuel he had, and about the engine problem. (Mateo Tr. at 11; Mateo Audio at 1907:31–1907:43). After hearing Anders' answers to these questions, Palmer told Anders to continue his present heading and explained that the controllers were going to try to get N375B "as close as [they could]" to the Flagler airport for Runway 29. (Mateo Tr. at 11; Mateo Audio at 1908:04). Palmer told Anders that an instrument approach would be necessary to land at the Flagler airport because there was a 900-foot broken cloud ceiling there, and he then asked Anders, "What are your intentions?" (Mateo Tr. at 11; Mateo Audio at 1908:04). Anders responded, "Give us the localizer please," (Mateo Tr. at 11; Mateo Audio at 1908:24), referring to a type of instrument approach that provides course guidance to the runway, (Manual, Pls.' Ex. 108A, at Pilot/Controller Glossary PCG L-2).

Palmer responded, "Okay the best we can do is an RNAV [approach] at that airport or we can reverse course uh back to Daytona uh is the only precision approach we have in our airspace for the ILS Daytona." (Mateo Tr. at 11; Mateo Audio at 1908:26). RNAV stands for "area navigation," (Manual at 1-2-6), and an RNAV approach is an instrument approach procedure that "relies on aircraft area navigation equipment for navigational

guidance," (Manual at Pilot/Controller Glossary PCG R-6). An ILS or "Instrument Landing System" approach is an instrument approach that includes, among other things, a localizer component and a glideslope component; a glideslope "[p]rovides vertical guidance for aircraft during approach and landing." (Manual at Pilot/Controller Glossary PCG I-4; id. at PCG G-1; see also id. at PCG L-2 (defining localizer as "[t]he component of an ILS which provides course guidance to the runway")).

After receiving the option of turning back to the Daytona airport, and without asking Palmer how far away the Daytona airport was, Anders told Palmer at 2:08:37, "We don't need a precision approach is there anything with a localizer or anything VFR?" (Mateo Tr. at 11; Mateo Audio at 1908:37). Palmer answered, "No all of our airports right now are IFR uh all ceilings are uh hovering right around 900 uh to a thousand feet." (Mateo Tr. at 12; Mateo Audio at 1908:41). Having been advised of these options, Anders told Palmer at 2:08:50, "Take the nearest one and try to break out at a thousand but[14] I don't have RNAV capability." (Mateo Tr. at 12; Mateo Audio at 1908:50). Anders thus explained that he would need some way other than an RNAV approach to get to an appropriate place to break out of the clouds to try to land the plane at the nearest airport.

Palmer then relayed to Anders, "We can do a surveillance approach and guide you into the airport uh you okay with that?" (Mateo Tr. at 12; Mateo Audio at 1908:54). Anders immediately answered, "Lovely with that." (Mateo Tr. at 12; Mateo Audio at 1908:59). Just short of two minutes had passed from the time Anders reported a propeller vibration until

[14] This "but" does not appear in the written Mateo transcripts (Gov't's Ex. 93 & Pls.' Ex. 14B), but it is plainly audible on the audio replay (Gov't's Ex. 77). In this and other instances where written transcripts and audio replay conflict, the Court has relied on the audio replay rather than the written transcripts.

he told Palmer that he was "lovely" with a surveillance approach to the Flagler airport. Palmer then told Anders at 2:09:01 to descend to 2000 feet and to contact Daytona approach—the North Arrival position—and provided the frequency. (Mateo Tr. at 12; Mateo Audio at 1909:01). Anders again thanked Palmer for his help. (Mateo Tr. at 12; Mateo Audio at 1909:06).

Approach to the Flagler Airport

Hill, who was manning the North Arrival radarscope, had heard Palmer declare the emergency and knew that he would soon take over responsibility for N375B as it descended. When Palmer handed the flight off to Hill, N375B was approximately 3 miles southwest of the Flagler airport at an altitude of 7000 feet. (Trial Tr. Day 3 (a.m.), Doc. 133, at 3 (Hill Test.)). Due to the high altitude of the plane, Hill planned to guide N375B over or just to the west of the Flagler airport and then turn it toward the east on the north side of the airport before turning it to the south on a five-mile base leg and a four-mile final approach to Runway 29, (Trial Tr. Day 2 (p.m.), Doc. 131, at 104), which runs in roughly a northwesterly direction from the southeast side of the airport.[15] The planned route would thus circle the airport clockwise as N375B lost its 7000 feet of altitude so that it could land.

At 2:09:13, Anders made contact with Hill as instructed by Palmer and let him know that he was on his frequency and that N375B was at 7000 feet and descending to 2000

[15] Airport runways are numbered in accordance with compass degrees. For example, a north-south runway would be referred to as Runway 18/36, indicating 180 degrees and 360 degrees; when approaching to the south, that runway would be Runway 18 and if to the north would be Runway 36. As another example, Runway 7 would run at a 70-degree direction from due north, and it would have a corresponding opposite Runway 25 running at 250 degrees. (See generally Trial Tr. Day 1 (a.m.), Doc. 122, at 41–42 (Fagras Test.)). Thus, Runway 29 at Flagler extends at 290 degrees from roughly southeast of the airport toward the northwest.

feet. (North Tr., Gov't's Ex. 94, at 2; North Radar Replay and Audio ("North Audio"), Gov't's Ex. 76, at 1909:13). Hill quickly responded, "Roger, descend and maintain 3000," adjusting the 2000-foot altitude that Palmer had initially assigned because there is an antenna north of the Flagler airport and the minimum vectoring altitude[16] at that point is 2200 feet. (North Tr. at 2; North Audio at 1909:17; (Trial Tr. Day 2 (p.m.), Doc. 131, at 103 (Hill Test.)). Anders did not object to the assigned 3000-foot altitude, and he acknowledged the instruction. (North Tr. at 2; North Audio at 1909:21). At 2:09:51, Hill instructed Anders to "turn right heading zero six zero." (North Tr. at 2; North Audio at 1909:51). Getting no response from Anders, eight seconds later Hill repeated the instruction and Anders then acknowledged it. (North Tr. at 2; North Audio at 1909:51–1910:01). At 2:10:18, Hill advised: "Bonanza three seven five bravo this will be an ASR approach to runway two nine at Flagler two nine at Flagler and you already got the weather at Flagler is that correct?" (North Tr. at 2; North Audio at 1910:18). Anders responded, "Ya we got about a thousand foot ceiling we'd[17] like to break out." (North Tr. at 2; North Audio at 1910:27).

About forty seconds later, at 2:11:06, Anders reported, "We've got zero oil pressure but we've got cool cylinder head temperature." (North Tr. at 3; North Audio at 1911:06). At the time of this report, N375B was about 2 miles north-northwest of the Flagler airport at an altitude of 5100–5300 feet. (See Trial Tr. Day 3 (a.m.), Doc. 133, at 6; STARS File, Pls.' Ex. 58, at 2). Hill acknowledged the loss of oil pressure and continued to vector

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[16] The "minimum vectoring altitude" or MVA generally is "[t]he lowest [mean seal level] altitude at which an IFR aircraft will be vectored by a radar controller." (Manual, Pls.' Ex. 108A, at Pilot/Controller Glossary PCG M-5).

[17] The written North Arrival transcripts (Gov't's Ex. 94 & Pls.' Ex. 14C) state "we like to break out" instead of "we'd like to break out," but "we'd" rather than "we" is plainly audible on the audio replay (Gov't's Ex. 77).

Anders, telling him to "turn right heading zero niner zero" and to "descend and maintain 2000." (North Tr. at 3; North Audio at 1911:25). Anders repeated, "right to zero nine zero from five down to two." (North Tr. at 3; North Audio at 1911:33). Hill noticed that Anders' turns were slow, so in an effort to keep N375B close to the airport, Hill gave Anders instructions for this and other turns earlier than he ordinarily would have done. (See Trial Tr. Day 3 (a.m.), Doc. 133, at 7). Hill remained in constant contact with Anders and at 2:11:47 told him "this will be guidance along the RNAV two nine approach the uh straight in minimum is 560 feet." (North Tr. at 3; North Audio at 1911:47). By "minimum," Hill was referring to the minimum descent altitude (MDA) for the RNAV 29 approach. The MDA is defined as "[t]he lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach . . . in execution of a standard instrument approach procedure where no electronic glideslope is provided." (Manual at Pilot/Controller Glossary PCG M-3).[18] Anders acknowledged this information. (North Tr. at 3; North Audio at 1911:58).

At 2:12:12, Hill radioed Anders, "Turn right one one zero, descend and maintain and um maintain 2000, we are gonna keep you in within about five miles from the airport." (North Tr. at 3; North Audio at 1912:12). Anders answered: "Roger that, over to one one zero and we're four point three down to two." (North Tr. at 3; North Audio at 1912:19). Watching the progress of N375B on his radarscope, at 2:13:12 Hill directed Anders to again turn right to heading one five zero. (North Tr. at 4; North Audio at 1913:12). Anders did not immediately respond, so Hill repeated this instruction eight seconds later. (North Tr. at

[18] As Hill explained, a pilot is not to go below the MDA unless he has the airport in sight. (Trial Tr. Day 3 (a.m.), Doc. 133, at 9).

4; North Audio at 1913:20). Anders then answered, signaling compliance with the right turn instructions and stating that he was at 3400 feet descending to 2000 feet. (North Tr. at 4; North Audio at 1913:24). At 1913:46, Hill told Anders that N375B was "about six miles east north east of the field" and to "turn right one eight zero." (North Tr. at 4; North Audio at 1913:46). Hill also advised Anders at that time that he was "on the base leg for about a four and a half to five mile final" approach. (North Tr. at 4; North Audio at 1913:46). Anders confirmed that he was on a "straight south" heading and that his altitude at that time was 2700 feet; he also reported that he was "starting to see some ground here," indicating a break in the clouds. (North Tr. at 4; North Audio at 1913:55).

At, 2:14:27, Hill instructed Anders to "descend and maintain 1600, fly heading two zero zero." (North Tr. at 4; North Audio at 1914:27). Seventeen seconds after Anders confirmed that instruction, Hill directed him to "turn further right now to two six zero." (North Tr. at 5; North Audio at 1914:34–1914:51). Anders acknowledged and said that he was "beginning to see the water here," meaning that he could see the ocean from an altitude of 1800 feet; at that time, the plane was roughly paralleling the coastline—slightly offshore—on its base leg. (North Tr. at 5; North Audio at 1914:57). Again making adjustments, Hill told Anders at 2:15:01 that he was "five miles southeast of the field" and to turn further to the right to "two seven zero." (North Tr. at 5; North Audio at 1915:01). Anders acknowledged and reported his altitude as 1600 feet. (North Tr. at 5; North Audio at 1915:09–1915:12).

Hill then told Anders that N375B was "right of course and correcting, four and a half miles from runway." (North Tr. at 5; North Audio at 1915:26). Anders calmly confirmed: "Four and a half miles from runway, thank you." (North Tr. at 5; North Audio at 1915:34).

Hill again advised Anders to turn right, this time to "two niner zero" and that doing so would put N375B at "four miles straight in." (North Tr. at 5; North Audio at 1915:36). In that transmission, Hill again reminded Anders that the "minimum descent altitude" for the RNAV approach on Runway 29 was 560 feet. (North Tr. at 5; North Audio at 1915:36). Anders responded "roger" and stated that he was at 1200 feet and descending. (North Tr. at 5; North Audio at 1915:50).

Because the plane continued to turn slowly, Hill had Anders make frequent adjustments to keep N375B on course. (Trial Tr. Day 3 (a.m.), Doc. 133, at 8–9). At 2:15:54, Hill again told Anders to turn right three one zero and again informed him he was "four miles straight in." (North Tr. at 6; North Audio at 1915:54). Anders calmly acknowledged, "Three one zero, four miles straight in." (North Tr. at 6; North Audio at 1916:02). About twenty seconds later, Hill repeated the same "three one zero" heading and advised that N375B was three miles from the runway. (North Tr. at 6; North Audio at 1916:23). Five seconds after that, Hill told Anders to advise when he had the airport in the sight, that the control tower at the Flagler airport had cleared him to land on Runway 29, and that he was slightly left of course but correcting. (North Tr. at 6; North Audio at 1916:28). At 2:16:46, Hill told Anders to adjust his course to three two zero, informed him that he was two and a half miles from the runway, and reminded him to advise when he had the airport in sight. (North Tr. at 6; North Audio at 1916:46). And at 2:17:07, Hill repeated the "three two zero" heading and told Anders that he was two miles from the runway. (North Tr. at 6; North Audio at 1917:07).

The Crash

Hill had lost contact with Anders. The last transmission from Anders had been at

2:16:02, and at 2:17:15—after several of Hill's transmissions were not acknowledged—Hill asked, "seven five bravo, you still with me?" (North Tr. at 6; North Audio at 1917:15). Hill did not get a response, but he instructed Anders to contact the Flagler tower and that if he did not have the airport in sight to "climb straight ahead to 2000" feet. (North Tr. at 7; North Audio at 1917:25). At 2:17:59, Hill heard Anders ask, in an urgent tone, "seven five bravo three seven five bravo do you read me?" (North Tr. at 7; North Audio at 1917:59). Hill responded, "Loud and clear," and asked at 2:18:01 if Anders had the airport in sight at "twelve o'clock and a mile." (North Tr. at 7; North Audio at 1918:01). Almost simultaneously, at 2:18:02, Dwayne Glass—a controller at the Flagler tower—reported to Raulerson that he had the plane in sight "right on the treeline" and that he would let Daytona know when it was on the ground. (North Audio at 19:18:03 (background)[19]; CIO Tr., Pls.' Ex. 14E, at 3; CIO Audio, Pls.' Ex. 23, at 10:18–10:23[20]). After not getting a response for twelve seconds, at 2:18:13 Hill again instructed Anders to contact the Flagler tower. (North Tr. at 7; North Audio at 1918:13).

The last communication from Anders came at 2:18:27, when he transmitted, "seven five bravo three seven five bravo, we need help, we're coming in with smoke." (North Tr. at 7; North Audio at 1918:27–1918:31). Hill responded at 2:18:32 that the Flagler tower was waiting for N375B and that the plane was cleared to land. (North Tr. at 7; North Audio at 1918:32). About thirty seconds later, at 2:19:00, the Flagler tower informed Daytona

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[19] Hill explained that Flagler informed Daytona of seeing the plane on what is known as the "shout line," which comes over a loudspeaker in the Daytona TRACON. (Trial Tr. Day 3 (a.m.), Doc. 133, at 27). The Flagler controller can be heard in the background of the North audio.

[20] This exhibit (Pls.' Ex. 23) does not provide the actual times of day at which transmissions were made. The times given in citations to this exhibit represent the point on this audio exhibit at which the transmission appears.

that the plane "did not make it." (North Tr. at 7; North Audio at 1919:00–19:19:04).[21] N375B had crashed "about three quarters of a mile from the runway, slightly left of its extended centerline." (Stipulated Facts ¶ 21). It "ultimately came to rest in a single-family residence," and "a post-crash fire ensued." (Id. ¶¶ 21–22). All three occupants of the plane perished. (Id. ¶ 23).

Two witnesses—Flagler tower controller Dwayne Glass and Flagler airport director LeRoy Seiger—testified about seeing the plane approaching the Flagler airport. Neither could attest to whether the plane's landing gear was down when they saw it approaching. (See Trial Tr. Day 4 (p.m.), Doc. 142, at 116 (Glass Test.); Trial Tr. Day 3 (p.m.), Doc. 136, at 77 (Seiger Test.)). Glass testified that he saw the plane about a mile and a half from the airport, "very low," coming "straight towards the airport." (Trial Tr. Day 4 (p.m.), Doc. 142, at 136–38 (Glass Test.)). Seiger, who observed the plane from one of the airport taxiways, testified that the plane was flying with "wings level" but "seemed to be sinking." (Trial Tr. Day 3 (p.m.), Doc. 136, at 69, 74). As Seiger was about to utter, "He's too low, he's not gonna make it," Seiger lost sight of the plane. (Id. at 74). In a written statement that Seiger completed for the FAA a few days after the crash, Seiger reported, "I observed N375B on a ¾ mile final pitch up slightly and the left wing dipped hard to the left and the aircraft went

[21] There are two versions of the North Arrival Transcript in the record—Government's Exhibit 94 and Plaintiffs' Exhibit 14C. There is a discrepancy in the times given on these transcripts after Zulu 1919:00. Plaintiffs' version of the transcript reflects that Flagler contacted Daytona at 1919:00, that Daytona acknowledged over a minute later—at 1920:03—and that Flagler reported "he did not make it" at 1920:04. The Government's version, however, reflects the times of these events as 1919:00, 1919:03, and 1919:04—without an intervening minute between Flagler's contact and Daytona's acknowledgment. Based on the North Radar Replay and Audio (Gov't's Ex. 77), which is consistent with the Government's transcript and with the amount of time that passes on Plaintiffs' version (see Pls.' Ex. 22 at 15:47–15:51) of the North Audio, the Court credits the times in Government's Exhibit 94 over those in Plaintiffs' Exhibit 14C.

behind the treeline." (Seiger Statement, Pls.' Ex. 43).

Examination of the wreckage revealed that the connecting rod in the number four cylinder in the engine had separated and punched a hole in the engine's crankcase. But the cause of the crash was not established at trial. None of Plaintiffs' witnesses could attest to when the hole in the crankcase occurred or when the engine failed completely, if indeed it failed completely prior to the crash. (See Trial Tr. Day 4 (p.m.), Doc. 142, at 103 ("We don't know [when the hole in the crankcase occurred].") (Mackey Test.)). And Plaintiffs' piloting and airplane mechanic witness, Keith Mackey, acknowledged that chordwise scratching on the propeller blades indicated that the plane had at least some power at the time of the crash. (Trial Tr. Day 4 (a.m.), Doc. 145, at 17).

Anders never advised the Daytona controllers that he lost power, that he could not maintain altitude, or that he could not navigate. Nor did Anders report that either he or Shaw suffered from a loss of sense of awareness. Although slow in making turns, throughout his contact with the controllers—up until 2:17:19, when his tone became more urgent—Anders remained calm and responsive to instructions.

II. TRIAL WITNESSES AND MOTIONS

At trial, the Plaintiffs called fourteen witnesses, seven of whom offered testimony in support of Plaintiffs' theory of liability. Of the seven liability witnesses, three were expert witnesses offering opinion testimony: Paul Fagras, an air traffic controller; Dr. Lee Branscome, a meteorologist; and Keith Mackey, a pilot and airplane mechanic. The Government called seven witnesses, six of whose testimony related to liability. Of the six liability witnesses, two were experts: William Turner, an air traffic controller, and Dr. L. Ray Hoxit, a meteorologist.

The trial of this case was unusual with regard to the witnesses the parties elected

not to call. Originally, Plaintiffs indicated that they would call controllers Palmer and Hill, but at the last minute, Plaintiffs announced that they would not call either of them in their case-in-chief. The Government had also intended to call Palmer and Hill, so the Court took their testimony out of turn during Plaintiffs' case to avoid these witnesses' having to make another trip to Orlando.

Plaintiffs also announced that they intended to call Douglas Herlihy, an accident reconstruction expert. The Government objected on grounds that Herlihy had not been listed as a witness for the Plaintiffs' case-in-chief but only as a rebuttal witness. The Court sustained the objection, creating the unusual circumstance of Plaintiffs not having an accident reconstruction expert to give testimony as to the cause of the accident. Probably because the Plaintiffs did not present opinion testimony as to the cause of the accident, the Government elected not to present the testimony of Dr. Kenneth Orloff, its accident reconstruction expert. Thus, there was no trial testimony from any accident reconstruction expert.

Three motions to strike were made during the trial: a written motion (Doc. 119) by Plaintiffs to strike the deposition transcript of Gary Shimon, and *ore tenus* motions by the Government to strike the testimony of Plaintiffs' air traffic control expert, Fagras, and their piloting and aircraft mechanic expert, Mackey. Plaintiffs' motion was briefly discussed at trial and deemed moot, (see Trial Tr. Day 3 (p.m.), Doc. 136, at 123–127), and it is hereby denied as such. The other two motions were denied during trial, but because the Court, as the factfinder in this FTCA case, is called upon to weigh the credibility of witnesses, the bases for these motions are important and therefore the Government's two motions are discussed in more detail here.

A. Motion to Strike Fagras's Testimony

After Plaintiffs' air traffic control witness, Fagras, testified, the Government moved to strike his testimony on the basis that Fagras copied portions of his expert report and then denied doing so under oath. The Court denied the motion but announced that it would consider Fagras's conduct in weighing his testimony. That ruling is explained here.

Before trial, Plaintiffs identified Fagras as their air traffic control expert. During a pretrial deposition, the Government asked Fagras if he had talked to any of the other experts in the case, and he responded that he had not. (Fagras Dep. Excerpt, Doc. 130-2, at 3). Fagras acknowledged in his deposition that he had read other experts' reports but denied relying on those reports or taking anything from other expert reports and putting it in his own report. (Id.).

Because of his training and experience as an air traffic controller, the Court qualified Fagras to give expert opinion testimony at trial under Federal Rule of Evidence 702. During cross-examination, the Government confronted Fagras with portions of his report that were substantially similar to portions of the report of Plaintiffs' piloting expert witness, Mackey; some parts of Fagras's report were, in fact, word-for-word identical to Mackey's report. (See, e.g., Gov't's Ex. 189 (comparison of the two reports)). Fagras emphatically denied obtaining any content in his report from elsewhere, insisting that "[e]verything in my report was my work . . . . It was based on my analysis and done in my hand . . . . The words in my report are my words." (Trial Tr. Day 2 (a.m.), Doc. 126, at 51–52). But despite Fagras's protestation, it was clear that portions of Fagras's report had been copied from another source. After intense cross-examination, the Government moved to strike Fagras's testimony because it was obviously false as to authorship of the report. (Id. at 53). The Court took the motion to strike under advisement, (id.), and the Government later

supplemented the motion with a memorandum of law (Doc. 130). Plaintiffs then filed an opposition to the motion. (Doc. 144).

At the end of the first week of trial, with the motion to strike still pending, Plaintiffs again called Fagras to the stand. This time, Fagras admitted that his earlier testimony as to authorship of his expert report was false. He explained that parts of his report were not written by him; he obtained those portions not from Mackey's report but from a summary document prepared and provided to him by Plaintiffs' counsel. Fagras went on to say that his earlier misleading and false claims of authorship were the result of his uncertainty as to whether he should disclose Plaintiffs' counsel as the source of the language he incorporated into his report. (Trial Tr. Day 5 (p.m.), Doc. 150, at 70). In the end, Fagras decided that rather than reveal that information, he would testify falsely. And he did just that.

In Plaintiffs' opposition to the Government's motion to strike Fagras's testimony (Doc. 144), Plaintiffs' counsel defended Fagras's conduct, maintaining that generally it is permissible for counsel to provide factual information to an expert witness for consideration and use by the expert—with no attribution—in forming an opinion. Alternatively, counsel sought to excuse Fagras's conduct and rehabilitate his credibility. These arguments fail.

It is true that Federal Rule of Civil Procedure 26(a)(2)(B) does not prohibit counsel from providing needed assistance to experts in preparing their reports. See, e.g., Fed. R. Civ. P. 26(a)(2) advisory committee's note to 1993 amendment (noting that "Rule 26(a)(2)(b) does not preclude counsel from providing assistance to experts in preparing the reports, and indeed, with experts such as automobile mechanics, this assistance may be needed."). And no harm comes from counsel providing technical assistance in the

preparation and publication of an expert report. In this case, however, Fagras went well beyond accepting technical or editorial assistance. Indeed, Fagras adopted some of the counsel-provided information as his opinions. And, of course, even if he had been within bounds to adopt information supplied to him by counsel, he was wrong to lie and mislead the Court about the source of that information.

In the failed effort to rehabilitate Fagras's credibility, Plaintiffs' counsel offered several arguments. First, counsel suggested that Fagras's mendacity should be excused because of his inexperience testifying as an expert witness. Next, counsel attempted to mitigate Fagras's conduct by explaining that he testified falsely only to avoid disclosing that Plaintiffs' counsel was the author of the copied material. In other words, Fagras believed he had a duty to protect counsel and that that duty trumped his oath to tell the truth. He considered himself to be a member of "Plaintiffs' team" and he wanted to make sure he did nothing to impede the team's success. This proffered explanation of loyalty to Plaintiffs' counsel is not an excuse, but it may explain why some of Fagras's air traffic control opinions are in conflict with a plain reading of the Air Traffic Control Manual (Pls.' Ex. 108A).

Plaintiffs' counsel also contended that Fagras's untruthfulness should be overlooked because of his long service as a federal employee. This argument makes no sense and is an insult to all federal employees; it suggests that they be held to a lower standard and that their oath to tell the truth is somehow less important. If anything, however, the public is entitled to expect that long government service would reinforce a witness's resolve to give truthful testimony.

Finally, Plaintiffs' counsel argued that Fagras's sense of guilt and remorse weighs in favor of his credibility. But Fagras's contrition has little to do with whether he intentionally

misled the Court by giving false testimony. And regardless of how sincere Fagras's regret may be, it was slow to develop; it was not until the falsity of his testimony was plainly obvious that he confessed. When first given an opportunity to correct the false statement that he made in his deposition, Fagras dug in, steadfastly denying the plagiarism.[22] Although he eventually admitted that he had adopted as his own information provided by Plaintiffs' counsel, that acknowledgment came only after rigorous cross-examination that plainly revealed his testimony to be false.[23]

The Court denied the motion to strike but advised counsel that it would take Fagras's false and misleading statements into account in assessing his testimony. Because this is a case brought under the Federal Torts Claim Act, the Court is the finder of fact and it is the Court's responsibility to consider the evidence, including the testimony of witnesses.

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[22] Plaintiffs' counsel takes issue with the Government's use of the word "plagiarize" to describe Fagras's use of counsel's written product in preparing a report that he attempted to pass off as his own. Counsel contends that because counsel had given Fagras permission to use his product, that use does not constitute plagiarism. The common understanding of the word, however, does not include a requirement that use be without the permission of the true author. For instance, Black's Law Dictionary defines "plagiarism" as "[t]he deliberate and knowing presentation of another person's original ideas or creative expressions as one's own; the wrongful appropriation of another's expression of ideas, or of the ideas themselves, by slight variation of expression; [specifically], the act of stealing passages from someone else's compositions, either verbatim or in substance; literary theft . . . . Generally, plagiarism is immoral but not illegal. If the expression's creator gives unrestricted permission for its use and the user claims the expression as original, the user commits plagiarism but does not violate copyright laws." *Plagiarism*, Black's Law Dictionary (10th ed. 2014). Of course, this argument misses the point in any event because it attempts to focus on the technical definition of "plagiarism" and not Fagras's false testimony.

[23] Florida Rule of Professional Conduct 4-3.3(a)(4) places on lawyers a burden of candor toward the court, providing in part: "If a lawyer, the lawyer's client, or a witness called by the lawyer has offered material evidence and the lawyer comes to know of its falsity, the lawyer shall take reasonable remedial measures including, if necessary, disclosure to the tribunal." Here, by recalling Fagras, counsel did what is required by the rule, but it is disappointing that remedial action was not taken for three days.

In weighing the credibility of witnesses, the Court considers the same factors that it instructs juries to consider, including "whether there is evidence that [the] witness testified falsely about an important fact" and, "if a witness misstated something, . . . whether [that] was because of an innocent lapse in memory or an intentional deception." Eleventh Circuit Pattern Jury Instruction (Civil) 3.5.1. Fagras did testify falsely about important facts, and his false statements were not because of a mistake or lapse of memory.

For various reasons, Fagras's opinion testimony was unpersuasive. But it was his false and misleading testimony as to the source of his report that gave rise to the Government's motion to strike his testimony. Although the motion was denied, Fagras's untruthfulness further eroded any confidence the Court would have had in his opinions. Thus, the Court finds Fagras's testimony regarding causation, duty of care, and alleged breaches of duty of care unreliable.

B. Motion to Strike Mackey's Testimony

Mackey testified as Plaintiffs' piloting and aircraft mechanic expert, and during trial his opinion testimony regarding N375B's engine was drastically different from the opinions contained in his pre-trial expert report. The Government moved to strike Mackey's inconsistent trial opinions. The Court denied that motion during trial and now further explains its ruling.

In his report, Mackey opined: "At [2:07:01] the pilot reported 'a vibration in the prop.'. . . Unknown to the pilot, the vibration was caused by the failure of the number 4 cylinder connecting rod." (Mackey Report, Gov't's Ex. 188,[24] at 14). Mackey explained in the report

[24] This report was not admitted as substantive evidence at trial. Instead, the Government moved for its admission and the admission of Fagras's report after the issue of the similarities between the reports arose. The Court has considered Mackey's report only as to the issue of the similarities between the two experts' reports and the issue of

that "[t]he engine failed after the #4 connecting rod separated and punched a hole in the crankcase." Id. at 18. And "[w]ith the hole in the crankcase caused by the fracture of the #4 connecting rod, the remaining oil in the engine would be quickly lost overboard." Id. This, in Mackey's initial opinion, resulted in Anders' "zero oil pressure" report at 2:11:06. (Trial Tr. Day 4 (p.m.), Doc. 142, at 50).

As the Government notes, Plaintiffs relied on these opinions at the January 2017 Daubert hearing challenging the opinions of the Government's accident reconstruction expert. Whether there was oil in the engine was an issue. Plaintiffs' counsel, contending that the failure of the engine was not due to a lack of oil, argued, "the engine problem that caused the pilot to call air traffic control and report vibration was due to the failure of the number 4 bearing rod [sic] and bearing." (Daubert Hr'g Tr., Doc. 77, at 75). Plaintiffs' argument that there was oil in the engine was consistent with Mackey's assertion that at the time of the crash "the propeller did not reveal evidence of rotation." (Mackey Report, Gov't's Ex. 188, at 14). Plaintiffs' counsel never filed a supplemental report indicating that Mackey's opinion as to this sequence of events had changed.

But at trial, Mackey's testimony was very different. He backed off his opinion that the connecting rod punched a hole in the crankcase at or just before 2:07:01, attesting instead that the propeller vibration was due to a "bearing starting to fail." (Trial Tr. Day 4 (p.m.), Doc. 142, at 51). Mackey came up with another explanation for the mechanical problem and loss of oil pressure; his revised opinion was that the distance between the bearing and journal widened, and oil squirted out, causing the oil pressure to drop. (Id. at 52–53). Under his new theory, some oil pressure remained in the system. Mackey's newly

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Mackey's changed expert opinion testimony.

minted opinion—revealed for the first time at trial—was that loss of oil resulted in the propeller going to "flat pitch," creating a drag and causing a sharp descent at 2:15:47. (Id. at 102).

The changes in Mackey's opinion are troubling. First, when asked, he did not know the prescribed distance between the bearing and the journal. And although at trial he claimed that there was not yet a hole in the crankcase when Anders first experienced the vibration or even when he reported zero oil pressure, Mackey could not say how much oil pressure there was. Mackey even suggested that Anders may have exaggerated when he reported zero oil pressure. In an attempt to explain why Anders would falsely report zero oil pressure to the controllers trying to help him, Mackey mused that perhaps Anders wanted to get the controller to "appreciate the seriousness of his situation, and not alarm his passengers." (Trial Tr. Day 5 (a.m.), Doc. 145, at 9). This is a feeble attempt to make the implausible plausible. Of course the controllers understood the seriousness of the problem; Anders had already told them about the vibration and the drop in oil pressure. And it is unclear how Mackey's report of "zero oil pressure"—rather than merely "low oil pressure" or "falling oil pressure"—would comfort his passengers. At any rate, this is mere speculation on Mackey's part.

Mackey's new opinion is not reliable. The descent, which Mackey now attributes to a flat-pitch propeller creating drag, is just as likely explained by Hill's communication to Anders at 2:15:36 that he could "descend to [the] minimum descent altitude" and the likelihood that Anders followed that instruction as he had followed others. (North Tr. at 5; North Audio at 1915:36). And if N375B had suffered an engine failure while Anders was communicating with Hill, it is a difficult to imagine that Anders would not have told Hill about

it. Instead, at 2:16:02, Anders responded to Hill's statement to "slightly turn right three one zero, three one zero four miles straight in," by calmly repeating "three one zero four miles straight in." (North Tr. at 6; North Audio at 1915:54–1916:02). Anders did not mention loss of power, and he remained very calm in his transmissions.

At trial, Mackey, having retreated from his earlier opinion, was unable to state when the engine failed. He also alluded to the possibility that drag caused by the premature lowering of N375B's landing gear led to the sharp descent:

> Q: When do you believe the engine failed completely?
>
> A: When everyone else thinks the gear went down, that's when the prop went to flat pitch. That's what caused the steep descent.
>
> Q: Because in your deposition, sir, you said, "At what point did the engine fail?" "I believe it failed when that rate of descent picked up quickly. When everyone thinks the gear went down, it didn't. That's when the engine failed." Now you're saying it's the prop?
>
> A: That's when the oil pressure went to zero, and that's what caused the prop to go to flat pitch. If the engine happened to quit at that time, the engine was wind-milling. The prop was probably driving the engine. So at the point when it actually would—could not develop any power, I don't know. Effectively, the engine had failed there.

(Trial Tr. Day 4 (p.m.), Doc. 142, at 102). No evidence was presented at trial that Anders lowered the landing gear, but Mackey noted that possibility without explaining how he concluded that landing gear did not create the drag. But in the end, he admitted that he does not know when the engine lost power.

There are two possibilities for Mackey's change in testimony. The first is that, as he said, after an opportunity for further inspection and reflection, he changed his mind. The other, suggested by the Government, is that he realized that his original opinion as to when the engine failed would not withstand scrutiny and changed his views to accommodate Plaintiffs' case. Unfortunately, the second possibility is more feasible. After Plaintiffs filed

Mackey's report, the Government's accident reconstruction expert filed his report and testified at a Daubert hearing debunking Mackey's theory as to when the engine failed. Mackey now agrees with the Government's expert that it would have been impossible for N375B to fly—without power—from where Mackey originally said it lost power to the crash site.

Regardless of the reason for Mackey's change of mind, Plaintiffs' counsel failed to supplement Mackey's expert report. Mackey's new opinions were formed about a month before trial, and he discussed them with several of Plaintiffs' attorneys. Yet, Plaintiffs' counsel failed to file a supplemental expert report or do anything to put the Government on notice of Mackey's modified opinions. At the conclusion of cross-examination, counsel for the Government, relying on Federal Rule of Civil Procedure 37(c), moved to strike Mackey's trial testimony in its entirety for failure to file a supplementary expert report. The Rule permits courts to impose sanctions for failure to supplement information as required by Rule 26(e)(2).

The Court denied the Government's motion to strike Mackey's trial testimony, but it does, however, take the circumstances surrounding the changes and how they were made into account in assessing his trial testimony.

III. LEGAL STANDARDS

Under the FTCA, the Government may be held liable for "personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting with the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred." 28 U.S.C. § 1346(b)(1). Here, the alleged acts or omissions occurred in Florida, and thus Florida substantive law applies.

To establish a negligence claim in a wrongful death case, "a plaintiff must allege and prove (1) the existence of a legal duty owed to the decedent, (2) breach of that duty, (3) legal or proximate cause of death was that breach, and (4) consequential damages." Jenkins v. W.L. Roberts, Inc., 851 So. 2d 781, 783 (Fla. 1st DCA 2003). The duty owed by air traffic controllers is "Florida's 'traditional . . . standard of reasonable care, that which a reasonably careful person would use under like circumstances." Daley v. United States, 792 F.2d 1081, 1085 (11th Cir. 1986). "[W]hile 'the standard remains one of reasonable care under the circumstances . . . the circumstances in an emergency are different and it is reasonable to pay greater attention to an aircraft known to be in distress.'" Id. (second alteration in original) (emphasis removed) (quoting the district court's decision).

IV. CONCLUSIONS OF LAW

Defining the standard of care and what constitutes a breach of duty of controllers assisting a pilot in an emergency is beyond the understanding of the average finder of fact, whether jury or judge. Thus, testimony from an air traffic control expert is ordinarily essential. See Reiber v. United States, No. 05-22494-CIV, 2007 WL 7243427, at *1–2 (S.D. Fla. Aug. 13, 2007). In this case, Plaintiffs rely on Fagras's testimony to attempt to establish the applicable standard of care and the alleged breaches of the controllers' duties.

To explain the duties of controllers, Fagras relied in part on the procedures and phraseology promulgated by the FAA. These procedures are largely contained in what is referred to as the Air Traffic Control Manual. The FAA periodically reviews the Manual and modifies it as needed. The Manual in effect at the time of the crash at issue was incorporated in JO Order 7110.65U, effective February 9, 2012 (Manual, Pls.' Ex. 108A). At trial, in some instances Fagras did not rely on specific provisions of the Manual but

instead purported to rely on his own experience.

Before addressing Fagras's specific claims of breach, it is important to note that apart from his false testimony as to authorship of his expert report, some of his opinions further diminished his credibility. As pointed out by the Government, to advance Plaintiffs' positions Fagras at times "ignored, and even contradicted, explicit provisions in the [Manual] when those provisions did not suit Plaintiffs' case." (Gov't's Mem., Doc. 169, at 5).[25] In other instances, Fagras gave a hypertechnical interpretation of a provision in order to advocate for Plaintiffs.

Relying on Fagras's testimony, Plaintiffs have taken a shotgun approach in attempting to establish a basis for liability. Fagras testified to manifold instances of the controllers' actions allegedly falling below the standard of care, including his assertion that Flagler was not a suitable airport and should have immediately been ruled out by Palmer. Fagras contends that there were other cascading breaches involving the controllers' attempts to assist Anders in safely landing his malfunctioning aircraft.

But there are several major problems with Fagras's testimony as to breach of duty. For instance, in reaching his conclusions, he discounts the Manual's directive that controllers are to "exercise their best judgment" when confronted with situations not covered by it. (See Manual ¶ 1-1-1). And Fagras's underlying premise—that when Anders reported the propeller vibration, N375B was closer to the Ormond airport than the Flagler airport—is, at best, misleading. These views inform Fagras's other opinions as to the

[25] In a similar vein, during closing arguments counsel for the Government aptly stated: "While I appreciate the argument that if the opinions are rooted in the Manual then they should be given weight, . . . when the opinions that claim to be rooted in the Manual are really just misinterpretations of the manual, . . . that further goes to a reason not to credit that testimony."

controllers' alleged breaches of duty, and they do not hold up.

A. Anders' request to descend and the grant of an IFR clearance

The first error that Plaintiffs attribute to the controllers is Palmer's granting of Anders' urgent request to descend just after the report of the propeller vibration. (See Mateo Tr. at 10; Mateo Audio at 1907:19 (Anders telling Palmer, "We're going to have to drop quickly here.")). Plaintiffs contend that Palmer's response was premature. In support of this contention, Fagras testified that before granting Anders' request to "drop quickly," he would have obtained much more information from Anders. For instance, he would have probed Anders regarding the "status of the engine." (Trial Tr. Day 1 (p.m.), Doc. 124, at 65). He would have asked Anders a series of questions, such as "is [the engine] running?," "Is it making power?," and "Can you maintain level flight?" (Id.). Fagras also "would have discussed possibly preserving a few thousand feet of altitude and seeing if we could make it to Daytona," (id.), which was 12.4 nautical miles behind N375B when Anders reported the propeller vibration.[26] After having these discussions, Fagras allegedly would have presented Anders with multiple landing options, including the Ormond and Daytona airports, and information about those airports.

The Manual directs controllers to take immediate action in assisting pilots in distress. Chapter 10 of the Manual is devoted to emergencies. It acknowledges that "[b]ecause of the infinite variety of possible emergency situations, specific procedures cannot be prescribed." (Id. ¶ 10-1-1(d)). But when a controller "believe[s] an emergency exists or is imminent," he is to "select and pursue a course of action which appears to be most

[26] Plaintiffs' piloting and mechanic expert, Mackey, opined that even from 7500 feet of altitude the plane "probably would not have been able to make Daytona [if it had a complete power failure]. It would be right on the ragged edge." (Trial Tr. Day 4 (a.m.), Doc. 138, at 63–64).

appropriate under the circumstances and which most nearly conforms to the instructions in this [M]anual." (Id.).

The Manual states that a pilot in a "distress" condition should declare an emergency by using the word "Mayday" and preferably repeating it three times, and a pilot in an "urgency" condition should repeat "Pan-Pan" three times.[27] (Id. ¶ 10-1-1(b)). Once alerted to an emergency, controllers are required to "[o]btain enough information to handle the emergency intelligently." (Id. ¶ 10-1-2). Controllers' decisions "as to what type of assistance is needed" are to be based "on information and requests received from the pilot because [the pilot] is authorized by 14 CFR Part 91 to determine a course of action." (Id.). And at all times, the controllers are required to "[p]rovide maximum assistance to aircraft in distress." (Id. ¶ 10-1-3). Paragraph 10-2-1(a) is more specific, requiring controllers to "[s]tart assistance as soon as enough information has been obtained upon which to act. Information requirements will vary, depending on the existing situation." (Id. ¶ 10-2-1(a)). But the minimum information required to assist an inflight emergency is "[a]ircraft identification and type," "[n]ature of the emergency," and "[p]ilot's desires." (Id.).

Although Anders did not issue a "Mayday" or "Pan-Pan" alert or otherwise announce an emergency, it is undisputed that upon hearing the report of a vibration in the propeller at 2:07:01, Palmer and the other Daytona controllers immediately focused on N375B and appropriately treated the situation as an emergency. (See, e.g., Trial Tr. Day 2 (a.m.), Doc. 126, at 16 (Fagras Test.); Trial Tr. Day 7 (p.m.), Doc. 164, at 26 (Turner Test.)). At that

[27] "Distress" is defined in the Manual as "[a] condition of being threatened by serious and/or imminent danger and of requiring immediate assistance." (Manual at Pilot/Controller Glossary at PCG D-3). "Urgency" is defined as "[a] condition of being concerned about safety and of requiring timely but not immediate assistance; a potential distress condition." (Id. at PCG U-1).

point, Palmer knew from his radarscope the plane's position, altitude, and speed, and he also already knew N375B's aircraft identification and type[28] as well as the general nature of the mechanical problem. Things began to happen fast, and nothing other than the loss of valuable time would have been gained by asking Anders for information Palmer already had.

As soon as Anders mentioned the propeller vibration, Palmer relieved Hans, who was receiving on-the-job training from Palmer at the Mateo position, and took over the communications with the emergency aircraft. Within eight seconds after Anders' propeller-vibration report, Palmer responded that the nearest airport was five miles straight ahead and asked if Anders was "IFR capable and equipped." Ten seconds later, Anders reported that he was IFR, that he had an oil pressure problem, and that he was "going to have to drop quickly here." At that point, Palmer knew what Anders wanted—"pilot's desires" under paragraph 10-2-1(a)—and took immediate action to satisfy Anders' request. Within four

[28]About eight minutes before Anders reported the propeller vibration—after he had communicated with Palmer and Hans about climbing from 4500 to 7500 feet—Palmer clarified with Anders that N375B was a Beechcraft Bonanza. (See Mateo Tr. at 7; Mateo Audio at 1858:51—1859:12). Apparently, when information about N375B was inputted at another facility when flight following was requested by Anders, the aircraft was mistakenly identified as a Piper Navajo—a twin-engine aircraft—instead of as a Beechcraft Bonanza. The plane was misidentified on both the radarscope and the "flight progress strip"—a small piece of paper containing aircraft information that automatically prints out at the Daytona TRACON as an aircraft approaches Daytona's airspace. The radarscope showed the aircraft as a "PA31" (Piper Navajo) rather than a "BE35" (Beechcraft 35 Bonanza) until Palmer corrected it less than thirty seconds after Anders clarified that the plane was a "BE35 Bonanza" rather than a Navajo. (See Mateo Audio at 1859:12–1859:39; see also Manual, Appendix A, at A-26 (listing "type designator" as "PA31" for a Piper Navajo aircraft)). Either Palmer or Hans also corrected the aircraft type on the flight progress strip. (See Flight Progress Strip, Pls.' Ex. 14F). Incidentally, the erroneous Navajo indication likely explains Palmer's early partial question to Anders about "which engine" the problem was in; Palmer then immediately realized the Bonanza was a single-engine aircraft and changed his inquiry. (See Mateo Tr. at 11; Mateo Audio at 1907:43 ("Which engine and uh I'm sorry you said it's a vibration in your engine is that correct?")).

seconds of the beginning of that transmission, Palmer granted Anders' request to descend, advising that N375B was cleared to the Flagler airport and instructing Anders to descend to 2000 feet. Before taking action, Palmer had the information required by paragraph 10-2-1(a).

Palmer complied with the Manual in immediately granting Anders' request to "drop quickly" and granting him the IFR clearance that he needed to be able to do so. Because N375B left Ft. Pierce as a VFR flight, Anders was required to obtain an "IFR clearance" before he could descend from 7500 feet into the clouds below. Such a clearance requires a "clearance limit"—a point to which the aircraft is cleared—an altitude to maintain, and a heading. (See Trial Tr. Day 2 (a.m.), Doc. 126, at 12 (Fagras Test.)). Palmer promptly provided all three of these so that Anders could begin his requested descent. (See Mateo Tr. at 10; Mateo Audio at 1907:23 ("November three seven five bravo is cleared to Flagler via radar vectors descend and maintain two thousand on your present heading.")). The Flagler airport was the "clearance limit" for this IFR clearance, but that did not mean that the plane would necessarily be landing at the Flagler airport. (See Trial Tr. Day 2 (a.m.), Doc. 126, at 118 (Palmer Test.)).

Palmer appropriately granted Anders' request to descend without delay. The Court rejects Fagras's suggestion that Palmer should have deferred granting Anders' request in order to gather information and suggest preserving altitude. Of course, while that hypothetical extended discussion unfolded, N375B would have continued to travel at 7600 feet of altitude at 163.4 miles per hour (over a quarter mile every six seconds), ultimately requiring more time for N375B to lose altitude regardless of where Anders eventually chose to land. No support was provided for the notion that a controller should question a pilot's

desire to descend, and to delay the descent would certainly have usurped Anders' authority as the pilot in command—something that Plaintiffs elsewhere accuse the Daytona controllers of doing. Fagras repeatedly acknowledged that Anders wanted to "be on the ground," "come down," and "get on the ground." (See Trial Tr. Day 1 (p.m.), Doc. 124, at 65; Trial Tr. Day 2 (a.m.), Doc. 126, at 20 & 22). And as the pilot in command, Anders surely understood that if he wanted to preserve altitude instead of beginning to descend, he could have informed Palmer of that desire or requested to change the clearance he had been issued.[29] He did not do so.

B. Emergency Airport Recommendation

Plaintiffs next argue that Palmer acted below the standard of care with regard to discussing with Anders where and how N375B would land. Among other things, Plaintiffs assert that the Ormond airport was closer than the Flagler airport; that Palmer should have immediately ruled out the Flagler airport as a potential landing site; that Palmer was required to provide Anders with information about all available airports and Palmer usurped Anders' authority as the pilot in command; that Ormond was a more suitable airport; and that the surveillance approach that Palmer offered and Anders accepted was not "authorized." None of these contentions has merit.

As previously discussed, Palmer appropriately responded to Anders' emergency situation and immediately granted the request to descend. Paragraph 10-2-1 of the Manual instructs that after initiating action in dealing with an emergency, controllers should then "obtain the following items or other pertinent information from the pilot or aircraft operator,

[29] "[T]he pilot may request a different clearance from that which has been issued by air traffic control (ATC) if information available to the pilot makes another course of action more practicable . . . ." (Manual at Pilot/Controller Glossary at PCG A-5 ("Air Traffic Clearance")).

as necessary: 1. Aircraft altitude. 2. Fuel remaining in time. 3. Pilot reported weather. 4. Pilot capability for IFR flight. 5. Time and place of last known position. 6. Heading since last known position. 7. Airspeed. 8. Navigation equipment capability. 9. NAVAID signals received. 10. Visible landmarks. 11. Aircraft color. 12. Number of people on board. 13. Point of departure and destination. 14. Emergency equipment on board." (Manual ¶ 10-2-1(b)). And paragraph 10-2-15, titled "Emergency Airport Recommendation," lists seven factors for a controller to consider in recommending an emergency airport to pilots: "1. Remaining fuel in relation to airport distances. 2. Weather conditions. 3. Airport conditions. 4. [Navigational aid] NAVAID status. 5. Aircraft type. 6. Pilot's qualifications. 7. Vectoring or homing capability to the emergency airport." (Id. ¶ 10-2-15(a)).

Here, Palmer immediately knew several of these pieces of information from his radarscope, and before granting Anders' request to descend he had asked if Anders had capacity for IFR flight. Just after issuing the IFR clearance, Palmer asked Anders how many people were on board and how much fuel he had. Anders answered that there were three people on board and four hours of fuel, and Palmer then elicited more information about the mechanical problem and told Anders that the controllers were trying to get him close to the Flagler airport. Palmer advised Anders that the Flagler airport had a broken 900-foot ceiling—instrument meteorological conditions—and that therefore an instrument approach would be necessary to land there. In the same breath, Palmer asked Anders what his intentions were. Anders responded by requesting a localizer approach.

Palmer informed Anders that the Flagler airport only had RNAV approaches—approaches requiring GPS equipment—but that N375B could "reverse course back to Daytona" where there was an ILS approach—an approach that, undisputedly, an

instrument-rated pilot would understand includes a localizer component; in other words, where an ILS approach is available, a localizer approach is also available. (Trial Tr. Day 1 (p.m.), Doc. 124, at 54 ("A controller would expect that [the pilot] knows there is a localizer available if there's an ILS available, yes.") (Fagras Test.); id. at 67 ("My expectation as a controller is, yes, he understands that that's a component of the ILS system. So if an ILS is available, a localizer approach would also be available.") (Fagras Test.); accord Trial Tr. Day 7 (p.m.), Doc. 164, at 28–29 ("An ILS approach is the same as a localizer approach from a pilot standpoint. . . . [F]or all practical purposes, instrument rated pilots know . . . that an ILS approach has a localizer and would meet his request of a localizer approach.") (Turner Test.)).

Anders did not accept the option of the ILS approach in Daytona but instead again asked if "there was anything with a localizer or anything VFR."[30] Palmer answered "no" to this compound question, with an explanation that all airports in the area were IFR. Anders then said that he wanted to go to the nearest airport and "try to break out at a thousand [feet] but [he didn't] have RNAV capability." (Mateo Audio at 1908:50). Along with the information he already had, these requests and answers from Anders provided Palmer with all the information necessary under paragraph 10-2-1(b). Palmer then offered Anders a surveillance approach to the Flagler airport and Anders willingly accepted it by saying, "Lovely with that." From the time Anders reported the propeller vibration until he said that he wanted to go to the nearest airport, approximately two minutes passed. As noted earlier,

[30] Although Anders requested a localizer and did not seek or accept an ILS approach, the parties stipulated before trial that N375B was fitted with an ILS "precision radio navigation system" that allowed ILS landings. (Stipulated Facts ¶ 4). This was not mentioned during trial.

Palmer then handed N375B off to Hill, who conducted a surveillance approach to Runway 29 that very nearly resulted in the successful landing of the plane. Plaintiffs challenge the events leading to the undertaking of that approach and the use of the Flagler airport for this emergency aircraft.

1. The Flagler airport—not the Ormond airport—was closer.

Plaintiffs maintain that the Ormond airport was closer to the Flagler airport and that Palmer misinformed and misled Anders in telling him that the Flagler airport was closer. This accusation is not true in any meaningful way, and the insistence of Plaintiffs' witnesses to the contrary further diminishes their credibility.

While the location of N375B at 2:07:01 was described by the NTSB in a post-crash report as 5.4 nautical miles from the Ormond airport and approximately 6.9 nautical miles from the Flagler airport,[31] those distances do not reflect the relevant factor—the flying miles required to reach the Ormond airport at that juncture. The Flagler airport was indeed closer in flying miles. Fagras acknowledged during his testimony that the distance required by N375B to reverse direction from its northerly course toward the Flagler airport back toward the Ormond airport to the south was 1.8 miles—*if* a "standard rate turn" of three degrees per second was made. (See Trial Tr. Day 1 (p.m.), Doc. 124, at 76 (Fagras Test.); see also Manual at Pilot/Controller Glossary at PCG S-6 (defining "standard rate turn")).

[31] The Government contends that the NTSB's measurement of 6.9 nautical miles was an approximation and that by the time Palmer responded to Anders, N375B was slightly closer to the Flagler airport. (See Gov't's Mem., Doc. 169, at 23). Considering the plane's speed of 142–150 knots (.24–.25 nm/6 seconds), the plane had already traveled about another quarter of a nautical mile when Palmer told Anders at 2:07:13 that the closest airport was straight ahead five miles away. (See Mateo Audio at 1907:13). Thus, even using the NTSB's estimates, by that time the Flagler airport was only 6.4 nautical miles away and the Ormond airport was 5.9 nautical miles away—only ½ a nautical mile difference—and in another six seconds, the airports would have been equidistant even without factoring in the required turn to go back to Ormond.

Palmer took these factors into account in advising Anders that the Flagler airport was closer:

> Considering the aircraft momentum and his heading and his speed to determine that momentum, he was headed northbound and as an aircraft is continuing northbound, by the time he would reverse course and come back down to Ormond Beach, that would add a certain number of flying miles to his flight before he could actually get to Ormond. Because he was already headed in the direction of the Flagler County airport, I determined that to be closer flying-miles-wise.

(Trial Tr. Day 2 (a.m.), Doc. 126, at 116). Moreover, when communicating with Anders, Palmer was estimating airport distances based on N375B's position on his radarscope. Review of the Mateo radar replay reflects that Palmer's estimation of distance and of which airport was "closest" at 2:07:13 was certainly accurate and reasonable. (See Mateo Audio at 1907:13).

Thus, the testimony of Plaintiffs' experts that Ormond was closer is misleading; factoring in a 1.8-mile standard rate turn, even starting immediately at 2:07:01—which was not possible because that was the beginning of Anders' transmission to Palmer—Anders would have had to travel 6.9 nautical miles to reach the Flagler airport and 7.2 nautical miles to reach the Ormond airport. And considering the testimony that N375B turned more slowly than a standard rate turn as it was vectored to Runway 29 at the Flagler airport, it is reasonable to assume that the plane would not have turned back to Ormond at the standard rate either, and thus Ormond was actually even more than 7.2 nautical flying miles away at 2:07:01.

Palmer did not misinform or mislead Anders when he told him in the first transmission that the closest airport was straight ahead five miles. And when Anders requested "the nearest" airport at 2:08:50, there is no question that the Flagler airport was the closest airport; the plane had flown toward Flagler and away from Ormond for nearly

two minutes by that time. Plaintiffs' arguments as to Ormond being "the closest airport" are rejected.

2. The Flagler airport was not unsuitable, and certainly not obviously so.

Plaintiffs argue that Palmer erred in even considering the Flagler airport as a potential landing site for N375B. They contend that Palmer should have immediately recognized from N375B's "flight progress strip" that the plane did not have the GPS equipment required to make an RNAV landing—the only type of instrument approach available at the Flagler airport. Again, Plaintiffs' argument misses the mark.

When a VFR pilot travels with controller-assisted "flight following," a small piece of paper called a "flight progress strip" containing information about the aircraft is automatically printed out as the aircraft enters into each air traffic control facility's airspace. Data on the strip includes, among other things, the aircraft type, the discrete beacon code, and an "aircraft equipment suffix" that describes the navigational equipment on the aircraft.

Based on information entered into the system when Anders requested flight following from Miami controllers, the Daytona TRACON received a flight progress strip (Pls.' Ex. 14F) for N375B shortly before the plane entered the Daytona TRACON's airspace. The equipment suffix on the strip was "/U," seemingly indicating that N375B had no distance-measuring equipment and only a "transponder with Mode C," which transmits the aircraft's altitude so that it is visible on a controller's radarscope. (See Manual at Table 2-3-10 (table of aircraft equipment suffixes); Trial Test. Day 1 (a.m.), Doc. 122, at 32 (Fagras Test.); Trial Test. Day 4 (a.m.), Doc. 138, at 27 (Mackey Test.)). According to Fagras, the "/U" on N375B's flight progress strip signaled to controllers that there was no directional navigation equipment on board and therefore the controllers should have known

that N375B did not have RNAV capability. Thus, say Plaintiffs, the controllers should have directed Anders toward the Ormond airport, which offered a VOR approach, instead of to the Flagler airport.

But Fagras did not mention—as explained at trial by both Palmer and the Government's air traffic control expert, William Turner—that unless a pilot requests otherwise, a computer assigns by default the "/U" equipment suffix on flight strips for aircraft flying VFR while receiving flight following assistance. (Trial Tr. Day 2 (a.m.), Doc. 126, at 87 (Palmer Test.); Trial Tr. Day 7 (p.m.), Doc. 164, at 35–37 (Turner Test.)). When a flight is conducted as a VFR flight, the presence of navigational equipment is not a concern, and the "/U" suffix is not significant to controllers. (Trial Tr. Day 2 (a.m.), Doc. 126, at 80 (Palmer Test.); Trial Tr. Day 7 (p.m.), Doc. 164, at 34–35 (Turner Test.)). The Court credits the explanations of Palmer and Turner and concludes that the Daytona controllers were not on notice from the flight progress strip that Anders did not have a GPS and was not RNAV-capable.

Although Palmer could not have assumed that the "/U" suffix meant that N375B only had a transponder, and although he candidly testified that he initially assumed that N375B did have RNAV capability, (Trial Tr. Day 2 (p.m.), Doc. 131, at 79), he did not delay in discovering N375B's navigational limitations. From the initial report of a propeller vibration until Anders informed Palmer of his lack of RNAV capability less than two minutes later, Palmer was continually engaged with Anders. He asked if Anders was "IFR capable and equipped," and Anders responded "I'm IFR" without immediately explaining what type of equipment N375B had. After some back and forth exchange of information, Palmer offered the surveillance approach when Anders divulged that he did not "have RNAV capability."

And Anders' requests for only a localizer approach or a VFR airport certainly implied that the only landing equipment he had onboard—or at least the only equipment he was interested in using—was localizer equipment. Palmer obtained information about the plane's equipment in a timely manner, and it was in recognition of N375B's limited navigational capability that Palmer suggested the surveillance approach to the Flagler airport. Moreover, "vectoring or homing capability to the emergency airport" is but one of the factors listed in paragraph 10-2-15(a), and as the Government notes, the controllers did have "vectoring capability" to the Flagler airport.

There is an apparent inconsistency in Plaintiffs' argument about the "/U" suffix. While Plaintiffs assert that the "/U" suffix informed Palmer that N375B was not RNAV-capable, Plaintiffs do not explain why the strip did not on its face also rule out a VOR approach—an approach, as will be discussed later, that was available at Ormond.[32] The Government does not raise this point, and this Order does not turn on it. But it is curious that Plaintiffs insist that the controllers should have relied on the flight progress strip with regard to RNAV capability but ignore that it does not—as far as the Court can tell—show VOR capability either.[33]

In sum, the Court rejects Plaintiffs' flight-progress-strip argument.

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[32] Equipment suffixes for aircraft with "LORAN, VOR/DME or INS" are "/Y," "/C," and "/I." (Manual at Table 2-3-10). These are the only suffixes listed in this table that include VOR. (See id.).

[33] Palmer testified that he did not know whether N375B had the capability to fly a VOR approach. (Trial Tr. Day 2 (p.m.), Doc. 131, at 35–36). He also testified that whether it had such capability was not a consideration for him that day and that the Ormond airport had too many "cons" weighing against it to make it a better choice than the Flagler airport. (Id. at 38, 57, & 75). Hill testified that the plane had VOR capability—a point that does not seem to be disputed—but he did not explain how he knew that it had such capability. (Trial Tr. Day 3 (a.m.), Doc. 133, at 39).

3. Palmer was not required to list numerous options, and he did not usurp Anders' authority as pilot in command.

Plaintiffs also assert that Palmer was required to list numerous options to Anders for choosing a landing site. Fagras opined that this necessitated Palmer having a detailed and likely protracted discussion with Anders about available airports, weather conditions at each, and approach and runway information. Plaintiffs also maintain that Palmer usurped Anders' authority as the pilot in command in his communications with Anders about what his intentions were for landing N375B. Neither of these arguments has merit.

Fagras insisted that the Manual requires controllers to give pilots multiple options. (See, e.g., Trial Tr. Day 1 (a.m.), Doc. 122, at 117 ("The controller is required by the [Manual] to offer options to the pilot and then let the pilot determine what course of action he wishes to pursue.")). But the Manual does not prescribe this. In fact, the Manual suggests otherwise, directing controllers to consider certain factors "when recommending *an* emergency *airport*." (Manual, Pls.' Ex. 108A, ¶ 10-2-15(a) (emphasis added)). Turner explained: "There is no guidance to the air traffic controller that suggests that the air traffic controller should provide a wealth of information to the pilot and start offering options." (Trial Tr. Day 7 (p.m.), Doc. 164, at 27). Turner also explained that there was no requirement that controllers provide weather or approach information for all airports. (Id.).

Again, paragraph 10-2-15, titled "Emergency Airport Recommendation," directs controllers to "consider" various factors "when recommending an emergency airport." (Manual ¶ 10-2-15). This provision does not require the controller to discuss each factor with the pilot; it only requires the controller to *consider* the factors. Palmer testified that he did so and explained his consideration of weather and airport conditions, among other factors. (See Trial Tr. Day 2 (p.m.), Doc. 131, at 12–15). Turner agreed with Palmer's

decisionmaking process and testified that it "conform[ed] to the guidance provided to him as an air traffic controller." (Trial Tr. Day 7 (p.m.), Doc. 164, at 27–28).

The Court rejects Plaintiffs' assertion that Palmer was required to list options to Anders rather than discussing the situation with him as he did. Palmer elicited information from Anders and asked him what his intentions and desires were. When Anders asked for a localizer approach, Palmer offered him the Daytona airport and Anders did not accept that. When Anders then asked for the nearest airport, Palmer offered the surveillance approach and Anders accepted it. Palmer's actions conformed to the duty of care, and he was not required to list more options for Anders.

Plaintiffs also claim that Anders was not aware of his location or options, but the evidence shows otherwise. When Anders reported the propeller vibration at 2:07:01, Anders had just passed the Ormond airport, heading northbound. Because he was flying VFR, Anders was responsible for his own navigation. (Trial Tr. Day 7 (p.m.), Doc. 164, at 35–36 (Turner Test.)). While this alone is sufficient to support the conclusion that Anders knew where he was in relation to Ormond and other airports, there is additional evidence pointing to this finding. Plaintiffs' piloting expert, Mackey, agreed that it is likely that Anders was using his recently purchased sectional chart of the area (Gov't's Ex. 84) and N375B's VOR capability to navigate a northerly course parallel to the Victor 3 Airway.[34] This course

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[34] Mackey explained:

> Q: . . . [Y]ou're suggesting that Mr. Anders was flying parallel to the Victor airway that goes directly to the [Ormond] VOR. That's what you're suggesting he did?
>
> A: That's the way his course looks, yes.

(Trial Tr. Day 4 (p.m.), Doc. 142, at 80).

took N375B just to the west of the Ormond airport, where Anders would have received the Ormond VOR signal. The evidence indicates that Anders was aware of passing the Ormond airport and knew where it was. As Mackey explained on cross-examination:

> A: . . . I think it's reasonable to assume that he could have been flying a direct course to Knoxville and just watching the VORs tick off as he goes by them.
>
> Q: Including Ormond?
>
> A: Including Ormond.
>
> Q: So looking at the chart and realizing we just flew past Ormond—by the way, that circle there, the blue circle [on the sectional chart], that's an indication of an airport. It's not just a VOR, right?
>
> A: Right.
>
> Q: And so keeping track of where he was and realizing he just passed Ormond, he would say, [b]y golly, I just passed an airport, right?
>
> A: You could say that, yes.

(Trial Tr. Day 4 (p.m.), Doc. 142, at 84). Anders knew where he was and knew he had options. He was told of the ILS approach to Daytona, which he declined before being offered the surveillance approach to the Flagler airport; the fact that Anders did not ask Palmer how far it was to the Daytona airport when told of the ILS approach further buttresses the conclusion that Anders knew his location and what airports were nearby.

And Plaintiffs further argue that in addressing landing options for N375B, Palmer usurped Anders' authority as the pilot in command. Making this argument requires an imaginative interpretation of portions of the conversation between Anders and Palmer. First, Plaintiffs' experts interpret Anders' request to "take the nearest [airport] and try to break out at a thousand" as meaning he wished to fly to the nearest airport at altitude and then "spiral down" to land. Next, they interpret Palmer's offer of a surveillance approach to the Flagler airport as a rejection of that request. And finally, they interpret Anders' "lovely

with that" response as sarcastic resignation to his request allegedly not being granted. These contentions are without merit.

The cross-examination of Mackey unmasked the "spiral down" argument as being one based on unadulterated speculation:

> Q. Did [Anders] know he had an impending power loss?
>
> A. Yes, I'm sure that he did.
>
> Q. So why didn't he say to the controller at that very moment, you know what, I want to go direct to the airport. That's all I want to do. I want to go direct to an airport and circle overhead?
>
> A. That's the *impression he was conveying*. I want to go to an airport, closest airport and descend to a thousand feet, which was inaccurate, wasn't the ceiling, but that's where he thought he would break out. He wanted to circle over that airport until he broke out and maneuver the airplane.
>
> Q. Did he ever say, I'd like to spiral down over the airport in IMC conditions?
>
> A. No. No.

(Trial Tr. Day 4 (p.m.), Doc. 142, at 97–98 (emphasis added)). Nor did Anders mention the "high key" maneuver, a term of art describing a method of circling down over a runway to land—a method that Mackey suggested Anders desired to attempt. (See Trial Tr. Day 4 (a.m.), Doc. 138, at 77–78 (Mackey Test. (describing the "high key" or "360 overhead approach" that military personnel practice, which involves "com[ing] over the end of the runway and simulat[ing] a power failure and attempt[ing] to do a 360 turn, varying their bank and speed and end[ing] up being able to turn in alignment with the runway and land on the end of the runway if they do a good job")); cf. Manual at Pilot/Controller Glossary at PCG F-3 (defining "flameout pattern" as "a[n] approach normally conducted by a single-engine military aircraft experiencing loss or anticipating loss of engine power or control" and involving "start[ing] at a relatively high altitude over a runway ('high key') followed by

a continuous 180 degree turn to a high, wide position ('low key') followed by a continuous 180 degree turn final")).

But there is no evidence that this "high key" spiraling down is designed for IMC conditions or would be reasonably attempted by a civilian pilot through 6000 feet of cloud cover. And there is no legitimate basis to conclude that Anders wished to—or was trying to convey that he wished to—fly in IMC to a point directly over an airport and then spiral down, that any of his requests was denied, or that his "lovely with that" response was insincere or evidenced anything other than an appreciation of the suggested solution.[35] Anders's statement at 2:08:50 that he wanted to "take the nearest one and try to break out at a thousand *but* I don't have RNAV capability" suggests that he was seeking a way to get down to a thousand feet rather than that he had decided that "spiraling down" was the way he wanted to accomplish that. Moreover, even if Anders may have at some point considered circling down in any fashion, he accepted the surveillance approach when offered it, and he was the pilot in command.

In making their usurpation argument, Plaintiffs refer to Barna v. United States, 89 F. Supp. 2d 983 (N.D. Ill. 1999). Like this case, Barna involved a fatal crash of an airplane with engine problems during landing. The pilot in Barna repeatedly and specifically requested the controller to "'vector' him for 'the straight-in,'" abbreviating a full instrument approach. Id. at 993. This is something the controllers in that case could have easily accomplished and in fact was what one of the controllers originally planned. But the

[35] In this regard, the Mateo audio playback—rather than the written Mateo transcript—is especially helpful. There is no trace of sarcasm in Anders' voice when he opted for the surveillance approach by saying "lovely with that." On the contrary, Anders' tone suggests relief and gratitude. (See Mateo Audio, Gov't's Ex. 77, at 1908:59).

controller communicating with Barna misunderstood and insisted that Barna make the full and much longer approach. When it became clear to the pilot that his request was denied and the controller asked him about the approach he had been assigned, he responded, "[T]hat's my only choice I guess." Id. at 991. The court described the pilot's response as "a clear indication that what he had just heard was not a solution to his problem, but rather was further confirmation that no solution could be provided." Id. In other words, it was a sarcastic statement acknowledging that his request had been denied.

What happened in Barna may indeed have constituted usurpation of the pilot's prerogative, but that is not what happened in this case. The evidence here shows that the Daytona controllers listened carefully to Anders' requests and gave prompt, accurate, and courteous responses. There was no hostility or sarcasm. No pilot request was denied.

Rather than usurping Anders' authority as pilot in command, by asking Anders to state his intentions Palmer was trying to find out what Anders wanted to do. The conversation between Palmer and Anders did not include a single demand or rejection of a request made by Anders; it was a cooperative exchange in an effort to find a solution to a serious problem. There is no evidence supporting a conclusion that the Daytona controllers interfered with Anders' authority as pilot in command. On the contrary, it is clear from the exchange between Palmer and Anders that Palmer would have granted any request of a reasonable alternative that Anders might have suggested. And when Anders said "Lovely with that," it was not—as argued by Plaintiffs—an expression of sarcastic resignation to the perception that the controllers would not grant a request, but instead a positive, enthusiastic expression in response to Palmer's question.

In sum, the controllers neither deprived Anders of options nor usurped his authority

as pilot in command.

4. The Ormond airport was not more suitable than the Flagler airport.

Plaintiffs insist that the Ormond airport was obviously preferable to the Flagler airport as a landing site because it had an available VOR approach to Runway 17. Plaintiffs assert that the controllers breached their duty of care by not offering that approach to Anders. The Government, again having the better argument, responds that the Ormond airport was not more suitable than the Flagler airport and that Plaintiffs did not establish how Anders would have landed at the Ormond airport using the VOR 17 approach or otherwise.

Fagras opined that the Ormond airport was the best option not just because it was the closest airport—a contention the Court has already rejected—but also because it had a VOR approach. As discussed, the Ormond airport was not the closest airport, but other factors also weighed against its recommendation.

Significantly, the weather did not favor the Ormond airport over the Flagler airport. Airport weather conditions are provided to controllers at least once an hour and are displayed on the Information Display System (IDS) at their radar stations. (See, e.g., Trial Tr. Day 3 (a.m.), Doc. 133, at 5 (Hill Test.)). The weather reports available to the Daytona TRACON controllers when Anders reported the propeller vibration at 2:07:01 were readings taken seventeen minutes earlier, at 1:50 p.m. Those readings reported the Daytona airport's ceiling as 800 feet but varying between 600 feet and 1000 feet; the Ormond airport's ceiling as 600 feet overcast; and the Flagler airport's ceiling as 900 feet broken, 1400 feet overcast. (Gov't's Ex. 64; NTSB Report, Pls.' Ex. 20, at Bates US000028; Trial Tr. Day 6 (p.m.), Doc. 157, at 94 (Hoxit Test.); Trial Tr. Day 3 (a.m.), Doc. 133, at 121–22 (Branscome Test.)). Thus, the reported ceiling at the Flagler airport was

50% higher than that at the Ormond airport, and broken—indicating that there was between 5/8 and 7/8 cloud coverage—rather than overcast, which means that the sky is completely covered with clouds. (See Trial Tr. Day 1 (a.m.), Doc. 122, at 86 (Fagras Test.) (defining "broken" and "overcast"; Trial Tr. Day 3 (a.m.), Doc. 133, at 118 (Branscome Test.) (same)). The minimum descent altitude (MDA)—the altitude below which a pilot should not descend when landing without having the airport in sight—for the Ormond VOR 17 approach was 600 feet, while the MDA for the RNAV approach to Flagler's Runway 29 was 560 feet. Thus, a surveillance approach to Flagler's Runway 29 using the RNAV 29's MDA provided several hundred feet of "cushion" once an aircraft became VFR, while a VOR 17 approach at Ormond would provide none. (See Trial Tr. Day 2 (a.m.), Doc. 126 at 28–29 (Fagras Test.) (noting the ceilings and MDAs)).

Moreover, the wind was from the north—favoring a landing from the south rather than a southbound approach to Ormond's Runway 17. Also known to the controllers was that the two runways at the Flagler airport, both of which were unobstructed—were approximately 5000 feet long, 1000 feet longer than the two runways at Ormond, one of which was closed and had construction equipment on it. Fagras acknowledged that cloud ceilings, runway lengths, and airport conditions are important considerations in assessing potential landing sites. (Trial Tr. Day 2 (a.m.), Doc. 126, at 27–28).

Based on what was known to the controllers, not only was the Ormond airport itself not a superior option to the Flagler airport, but also a successful approach by Anders to Ormond's Runway 17 was far from a foregone conclusion. And Plaintiffs' experts did not even agree with one another as to how Anders would land at the Ormond airport.

Some of the problems with a VOR approach to Ormond's Runway 17 were revealed

during the testimony of Fagras and Mackey. Pilots making VOR approaches ordinarily use approach plates that contain detailed information necessary to execute the approach. In this case, there is no evidence that Anders had an approach plate for the Ormond VOR 17 approach onboard the aircraft. Without an approach plate, it is possible for a pilot to make a VOR approach, but to do so is complicated and requires significant controller assistance. The controller would have to orally issue the essential information that would have been available on the approach plate. That information indicates the frequency of the VOR, the radial, the minimum descent altitude, and the final approach fixes. (Trial Tr. Day 2 (a.m.), Doc. 126, at 30 (Fagras Test.)). Fagras admitted that the pilot would need a copy of the VOR approach procedure onboard because there are "too many variables" and "too much detail" for the controller to orally communicate the required information to the pilot. (Trial Tr. Day 1 (a.m.), Doc. 122, at 46). If the information were provided orally by the controllers, the pilot would likely have to write the information down—a challenging exercise for a pilot in distress—and in order to access the frequency, the pilot would have to adjust the radio and identify the VOR by listening to a Morse code signal, a significant workload for a pilot dealing with an emergency. (Trial Tr. Day 2 (a.m.), Doc. 126, at 31).

On cross-examination, Fagras also admitted that he did not know how far N375B was from the final VOR 17 approach to Ormond when Anders experienced vibration in the propeller. Because Fagras did not have this information, he could not determine whether Anders could lose enough altitude to make the approach by the time N375B intersected the VOR 17 radial if Palmer had vectored him to it. Fagras "would not have flown him direct" to that radial, (Trial Tr. Day 2 (a.m.), Doc. 126, at 34), but he could not give a good description of how his suggestion would have worked:

A: . . . I'd turn him eastbound and see how our altitude looked as he approached the final approach course. If it was at an adequate level that I thought he could made the airport and get down, I would turn him on to the final.

Q: How far is the final approach course from where he was when he reported the vibration?

A: I have not measured that distance.

Q: You don't know?

A: I do not know.

Q: So you don't know if the pilot could descend to the final approach course altitude in the time it would take him to turn and go to Ormond Beach?

A: As an experienced air traffic controller, I can estimate how far that distance is when I see it on the radar map.

Q: Right.

A: Certainly.

Q: Have you done that?

A: I have not.

(Id. at 35–36).

Mackey, for his part, was clear on the question of altitude, estimating that N375B would have been at 4100 feet when it reached Ormond if it had turned around at the time of the propeller vibration. (Trial Tr. Day 4 (p.m.), Doc. 142, at 30–31). Because of its altitude, N375B would have to descend. This could have been accomplished, said Mackey, by entering a published holding pattern or circling down directly over the VOR in what Mackey acknowledged was called the "cone of confusion." (Id. at 95).

This circling approach proposed by Mackey was not the VOR 17 approach, and neither was his "holding pattern" suggestion. As Turner explained, to execute the VOR 17 approach out of the holding pattern, the pilot would have to exit the holding pattern at at

least 1600 feet of altitude, fly away from the airport on the 161-degree radial, execute a 45-degree procedure turn, make a 180-degree turn, rejoin the 341-degree radial inbound, and then approach the airport. (Trial Tr. Day 7 (p.m.), Doc. 164, at 68–69). Thus, entering the hold was not the tidy solution that Mackey described it as.

The suggested circling down over the Ormond airport to land is further complicated by the fact that Anders did not have distance measuring equipment on board. Without a GPS or similar equipment, Anders would have been unable to independently determine how close he was to Ormond unless he was passing over the VOR. He would have been dependent on controllers to call out distances and to instruct him on his turns. And although the controllers' radarscopes indicated extended runway lines that facilitated vectoring for a surveillance approach to Flagler's Runway 29, no evidence was presented that the controllers' radarscopes indicated the fix points for the VOR 17 approach at Ormond.

To the extent that Mackey advocated for the "high key" approach, there is no evidence that Anders had ever executed such a maneuver before. And there is no credible evidence that Anders could have performed the maneuver in the conditions that existed in the area on the day of the crash.[36]

Thus, Plaintiffs' experts were not in agreement as to how the Ormond VOR 17 approach would have been modified to accommodate Anders or as to how Anders would

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[36] On direct examination, Mackey was asked: "Is there any reason why *a pilot—or you* would be not capable of making a circling descent over an airport until you broke out of the clouds and land?" (Trial Tr. Day 4 (a.m.), Doc. 138, at 77 (emphasis added)). Counsel for the Government objected. Because the Court interpreted the use of "you" to be a correction and substitution for *a pilot,* it overruled the objection. (Id.). Mackey answered "No," and the Court interprets that to mean that Mackey—obviously a highly skilled pilot, with 49 years of experience and 29,000–30,000 flight hours as a pilot in command, (see Trial Tr. Day 3 (p.m.), Doc. 136, at 131 & 138)—felt that Mackey could have executed the maneuver under the conditions at Ormond on the day of the crash.

have been able to land at Ormond. Moreover, as the Government points out, none of the Ormond "options" described by Mackey or Fagras is a published approach, and neither "procedure[] remotely resembles the VOR 17 approach that Plaintiffs cite as the decisive factor in selecting Ormond over Flagler." (Gov't's Mem., Doc. 169, at 33).

Additionally, the lack of accuracy of VOR approaches would have weighed against the Ormond VOR 17 approach as an option. A VOR approach is not a precision approach. According to Mackey, it has a permissible regulatory margin of error of plus or minus 6 degrees. (Trial Tr. Day 4 (p.m.), Doc. 142, at 85–86). This contrasts with the "spot on" precision of Hill's placement of N375B in preparation for landing on Runway 29 at the Flagler airport using the surveillance approach. (See Trial Tr. Day 7 (p.m.), Doc. 164, at 48 (describing Hill's placement of the plane via vectors as "spot on") (Turner Test.)).

Finally, Plaintiffs insisted that a landing at the Ormond airport would have taken less time than the surveillance approach to Runway 29 at the Flagler airport, which—from the time Anders first reported the propeller vibration to the time of the crash—lasted about 11 and half minutes. But Plaintiffs did not establish how long any of their proposals would have taken. They assert that Mackey opined that it would not take "eleven plus minutes," but the testimony they cite for that proposition was vague and pertained to gliding to the airport with a failed engine. (See Trial Tr. Day 4 (a.m.), Doc. 138, at 82–83). Moreover, given the slowness of N375B's turns, Plaintiffs' time estimates—which assumed standard rate turns—would have been erroneously short.

In sum, while Plaintiffs insist that the Ormond airport was a better option because it offered a VOR 17 approach, Plaintiffs' witnesses did not actually advocate for execution of that approach. Without that approach, the Ormond airport had nothing better to offer

Anders than the Flagler airport did. And the vague, speculative musings of Plaintiffs' witnesses about the possibilities of landing at the Ormond airport do not establish that the controllers were negligent in their handling of this emergency aircraft.

5. Offering the surveillance approach was not a breach of duty.

Fagras also opined that the controllers breached their duty of care by offering Anders an unapproved, "unauthorized" surveillance approach to Flagler's Runway 29. Because the approach provided by the controllers was not published[37] or "TERPed"—meaning checked for obstacle clearances by the FAA "Terminal Procedures" office, which develops surveillance approach procedures, (Trial Tr. Day 1 (p.m.), Doc. 124, at 84 (Fagras Test.))—Fagras considered the surveillance approach to Runway 29 at the Flagler airport to be nonexistent, (id. at 86). Section 10 of Chapter 5 of the Manual is titled "Radar Approaches—Terminal," and the first paragraph of that section provides:

> a. Provide radar approaches in accordance with standard or special instrument approach procedures.
>
> b. A radar approach may be given to any aircraft upon request and may be offered to aircraft in distress regardless of weather conditions or to expedite traffic.

(Manual ¶ 5-10-1). Although Fagras opined that an "unpublished" surveillance approach could never be used, the plain language of this provision does not prohibit controllers from providing pilots radar-assisted landing in emergency situations.

Fagras failed to cite any authority supporting his opinion that in dealing with Anders'

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[37] "Published" in this context means published to local air traffic controllers. Although "approach plates" for other types of approaches are published and available to pilots, (see U.S. Terminal Procedures Publication, Pls.' Ex. 12 (book of approach plates)), even "TERPed" surveillance approaches are not made available to pilots, but information pertaining to those approaches is available to local controllers. (See Trial Tr. Day 3 (a.m.), Doc. 133, at 57 ("[A]n ASR approach is not published. It's a local procedure.") (Hill Test.)).

emergency, the Daytona controllers breached their duty of care by offering a surveillance approach and failing to advise Anders that it was unpublished. On direct examination, Fagras acknowledged that he "saw nothing" in the Daytona TRACON powerpoint training material for surveillance approaches (Pls.' Ex. 41B) "that was contrary to the national directive or that wouldn't be reasonable." (Trial Tr. Day 1 (a.m)., Doc. 122, at 94). On cross-examination, counsel for the Government pointed out that the first bullet point of that training material provided: "ASR approaches are conducted to assist pilots in emergency situations, to expedite traffic[,] and on pilot request." (Pls.' Ex. 41B at 4). When confronted with this bullet point, Fagras gave incoherent and inconsistent responses:

> Q: ASR approaches are to be used in emergency situations, correct?
>
> A: That paragraph is being taken out of context because the previous paragraph states: Provide radar approaches in accordance with standard and special instrument approach procedures.
>
> Q: I don't think there was a previous paragraph. That was the first bullet point in that PowerPoint. Right? I can bring it back up.
>
> A: Well, I don't deny that, but the training department probably needs to add the fact that the preceding paragraph supersedes what[] you just read to me.

(Trial Tr. Day 2 (a.m.), Doc. 126, at 38).

In guiding controllers, the Manual takes into account that controllers have some discretion and must exercise it. The very first paragraph—titled "Purpose of this Order"—makes this clear, providing that controllers must "exercise their best judgment if they encounter situations that are not covered by [the Manual]."[38] (Id. ¶ 1-1-1). This point is

[38] Fagras initially testified that Chapter 1 of the Manual—in which paragraph 1-1-1 appears—deals only with "administrative-type issues," (Trial Tr. Day 1 (a.m.), Doc. 122, at 77), but he ultimately agreed that paragraph 1-1-1 is significant and binding, (Trial Tr. Day 2 (a.m.), Doc. 126, at 13 ("A good bit of [Chapter 1] is [administrative], but certainly [paragraph 1-1-1] applies.")).

made again in paragraph 2-1-1, titled "ATC Service," which instructs that controllers are to "[p]rovide air traffic control service in accordance with the procedures and minima in this [Manual] except when . . . [a] deviation is necessary to assist an aircraft when an emergency has been declared." (Manual ¶ 2-1-1 (c)). Turner testified that paragraphs 1-1-1 and 2-1-1(c) of the Manual authorized the Daytona controllers—faced with finding a way to get this emergency aircraft to the ground—to suggest the surveillance approach that N375B accepted. (Trial Tr. Day 7 (p.m.), Doc. 164, at 38 & 40). The Court finds Turner's testimony credible and agrees with his interpretation of the Manual on this point.

C. Execution of the Surveillance Approach

Plaintiffs also fault the controllers for their conduct after Anders accepted the surveillance approach to the Flagler airport. They contend (1) that Hill failed to follow Raulerson's instruction to keep N375B "turned in tight" by allowing Anders to fly an unnecessarily long, circuitous route to Flagler's Runway 29; (2) that they "introduced risk" by taking N375B offshore during the base leg of the approach; and (3) that they misled Anders as to what the routing to the airport was going to be and where the aircraft was during the route. These contentions fail.

1. Hill kept N375B in tight.

According to the NTSB's Air Traffic Control Group Factual Report (Pls.' Ex. 20), when Raulerson was interviewed after the crash he stated that after Anders reported zero oil pressure at 2:11:06, Raulerson told Hill "to turn the airplane in tight." (Pls.' Ex. 20 at Bates US000032). At trial, Hill did not recall Raulerson telling him this. (Trial Tr. Day 3 (a.m.), Doc. 133, at 63, 100). Plaintiffs argue that the statement to turn N375B in "tight" was an order to Hill, which Hill disobeyed. This argument is without merit; Raulerson explained in his deposition that his comment was not an order, and even though Hill does

not recall hearing Raulerson make the comment, Hill was already turning the plane in "tight" and continued to do so.

Raulerson explained in his deposition that he was not interfering with Hill's work. Raulerson recalled making the statement "Let's keep him in tight," but Raulerson was merely reinforcing what Hill was already doing. (Raulerson Dep., Doc. 149, at 65). Raulerson explained: "I made a comment, yeah, let's keep him in tight, but Mr. Hill is already turning—giving turns, you know. I could hear him giving turns to the pilot, so it was more of a reinforcement to keep him in tight, you know, although he's giving turns." (Id. at 113). Plaintiffs' counsel was persistent in his effort to get Raulerson to define what would constitute keeping N375B "tight" as it circled the Flagler airport. But Raulerson, explaining that N375B needed to lose altitude to make an approach, was deferential to Hill:

> Q: . . . Does it look like . . . [Hill] turned him in tight after that?
>
> A: The definition of tight—I would say that Mr. Hill was working the airplane. Considering the fact that I think Mr. Hill was doing what he had to do to get the aircraft down.

(Id. at 150–51). Other than the remark "let's keep him in tight," Raulerson made no comments about the route N375B flew. Certainly, if he thought Hill was violating his instructions, he would have said so at the time.

It was Hill's plan all along to keep N375B close to the airport. And he was successful. The path of N375B was considerably tighter than the published RNAV 29 approach upon which Hill based the surveillance guidance that he provided. That approach calls for aircraft to intercept the final approach course seven to ten miles from the end of the runway. (Trial Tr. Day 3 (a.m.), Doc. 133, at 100). Hill's plan was to have N375B intercept the final approach at four-and-a-half to five miles from the end of runway 29. (Id.). And by constantly having Anders make adjustments in his turns, Hill was able to bring

N375B onto the final approach as planned—approximately four-and-a-half miles out, much closer to the end of the runway than the full RNAV 29 approach.

It was the need to lose altitude that made the approach as long as it was. Turner confirmed that the distance flown was necessary to lose altitude and remain above the minimum vectoring altitudes in the vicinity of the airport, avoiding the risk posed by possible obstructions. Turner explained that the only way to have lessened the miles flown would have been for the plane to descend more quickly than it did. (Trial Tr. Day 7 (p.m.), Doc. 164, at 107). Hill "expected a little quicker descent" and faster turns, but he was letting Anders "fly the aircraft the way he felt comfortable flying the aircraft" and Hill adjusted his vectoring after slow turns to try to keep the plane in as close as he could. (Trial Tr. Day 2 (p.m.), Doc. 131, at 106). Turner testified, "And I don't think there's an air traffic controller in the world that's going to tell a pilot with an emergency with an engine problem, 'You need to descend faster. I want you to hurry on down.' I mean, a controller is not going to do that." (Trial Tr. Day 7 (p.m.), Doc. 164, at 107).

This was not a situation where the plane descended to a certain altitude and then had to fly for any length of time to arrive at the airport. On the contrary, the plane steadily descended from the inception of the controllers' communication with Anders. Hill initially instructed Anders to descend to 3000 feet at 2:09:17, and when Anders was still at 5000 feet, Hill instructed him at 2:11:25 to descend to 2000 feet. (North Tr. at 2–3; North Audio at 1909:17 & 1911:25–1911:33). Just as Anders was reaching 2000 feet, Hill instructed him to descend further to 1600 feet. (North Tr. at 4–5; North Audio at 1914:27–1914:34). Anders was then cleared to descend to the minimum descent altitude of 560 feet for the final approach. (North Tr. at 5; North Audio at 1915:36).

And when Hill explained to Anders that he was going to keep him within five miles from the airport, Anders enthusiastically accepted that idea. (North Tr. at 3; North Audio at 1912:19 ("Roger that.")). Hill succeeded in keeping N375B within five miles. The only time the plane was further from the airport than that during the surveillance approach was when Anders did not immediately turn to a 150-degree heading when instructed and Hill had to repeat that assigned heading; the plane was then briefly—as estimated by Hill—about six miles from the airport until Anders turned the plane further to the right. (See North Tr. at 4; North Audio at 1913:12–1913:46). Turner agreed that Hill succeeded in his planned tight routing. As Turner explained, "it's pretty evident that [Hill] kept him tight. If he would have kept him any tighter, then the aircraft would not have broken out of the clouds before he got to the airport." (Trial Tr. Day 7 (p.m.), Doc. 164, at 106).

The Court finds Turner's testimony credible and rejects Plaintiffs' assertion that Hill disobeyed Raulerson or otherwise did not turn the plane in tight or offer "maximum assistance" in his routing of the aircraft.

2. Plaintiffs' "over the ocean" argument is a red herring.

Plaintiffs also fault Hill for "introducing risk" by vectoring N375B "over the ocean" on the base leg of the approach. This argument is misleading. While N375B did travel slightly offshore, parallel to the coastline, while on the southbound base leg of the approach, Turner explained that the altitude of the plane at that point was such that if the engine failed, it would have been able to get back over land. (Trial Tr. Day 7 (p.m.), Doc. 164, at 111). And the plane would have been even closer to land if Anders had immediately complied with Hill's turning instructions, which at least twice had to be repeated. Moreover, the plane did not crash into the ocean, and thus causation is completely lacking as to this alleged breach of duty.

3. The controllers did not mislead Anders as to the plane's position or the route of the surveillance approach.

Next, Plaintiffs assert that the controllers misled Anders with regard to the planned route of the surveillance approach to Flagler's Runway 29 and that Hill did not inform Anders where N375B was relative to the airport while he was making the approach. These contentions are meritless.

Plaintiffs argue that when Palmer offered to "do a surveillance approach and guide [Anders] into the airport," Palmer was suggesting that he was taking Anders directly to the airport for a landing rather than routing him around the airport to Runway 29. Plaintiffs contend that Anders was duped by this and would not have agreed to the surveillance approach if he had known that it was not a "direct" route.

This argument defies common sense. When Palmer offered at 2:08:54 to "guide" Anders into the airport with a surveillance approach, Anders was well aware that he was at an altitude of at least 7000 feet and within five miles of the Flagler airport, traveling at well over 100 miles per hour and approaching from the south. Obviously he would not be able to be guided "directly" to the airport; he would need to lose altitude before he would have any chance of landing. And less than a minute and a half later, Hill informed Anders that the approach would be to Runway 29 at Flagler—a runway that, as all pilots would know, runs at 290 degrees from magnetic north—from southeast of the airport to northwest of the airport. (See North Tr. at 2; North Audio at 1910:18 "Bonanza three seven five bravo this will be an ASR approach to Runway two nine at Flagler two nine at Flagler.")). Anders, as well as passenger Shaw, who was a commercial pilot, would have realized that the plane would be routed around to Runway 29.

And both Hill and Palmer told Anders that they were going to keep him "close to" the airport—language that does not suggest a "direct" approach but instead a route around and near the airport that accommodated the plane's need to lose altitude. (See Mateo Tr. at 11; Mateo Audio at 1908:04 ("We are going to put you close to the Flagler County Airport"); North Tr. at 3; North Audio at 1912:12–1912:19 ("We are gonna keep you in within about five miles from the airport," followed by "Roger that.")). And almost immediately after the plane was handed off to Hill, Hill began giving Anders right-hand turns; a pilot would realize that he was being circled around the airport.

The Court rejects Plaintiffs' assertion that Anders thought he was being taken "directly" to an airport. Anders understood where he was and how he was being routed. And at no time did he request to go "directly" to the airport or indicate that he had changed his mind about accepting the surveillance approach he was offered.

D. Miscellaneous alleged omissions during the approach

Plaintiffs also allege several omissions by the controllers during N375B's surveillance approach to Flagler's Runway 29. They assert that Hill did not give Anders (1) complete weather information for Flagler; (2) a PIREP regarding the ceiling at Flagler; (3) a safety alert when a low altitude warning activated; (4) a missed approach procedure; or (5) a lost communications procedure.

1. Weather Information

Plaintiffs fault Hill for not providing Anders with complete weather information for the Flagler airport before Anders made the approach. They contend that Anders was never given information such as wind direction, wind speed, visibility, and dew point. The Government counters that Hill discharged his weather-reporting obligation by confirming

with Anders that he already had the weather information for the Flagler airport. The Court agrees with the Government.

Anders first contacted Hill at 2:09:13, after Palmer handed the plane off to Hill's North position. After giving Anders a few instructions about headings, altitude, and turns, at 2:10:18 Hill asked Anders, "you already got the weather at Flagler is that correct?" (North Tr. at 2; North Audio at 1910:18). Anders responded, "Ya we got about a thousand foot ceilings we'd like to break out." (North Tr. at 2; North Audio at 1910:27). Although Fagras insisted that Hill was required to ascertain what Anders knew about the weather and confirm that the information he had was correct, Turner explained that there was no reason for Hill to spend time talking about the weather with this distressed pilot when Anders told him he already had the weather. (See Trial Tr. Day 7 (p.m.), Doc. 164, at 46 ("Q: Was it reasonable for Mr. Hill, based on the pilot's response to him, to believe that the pilot had the weather? A: It's certainly reasonable. I mean, I think an air traffic controller is . . . entitled to believe that the transmissions from pilots are truthful.")).

The Court finds Turner's explanation credible. In this emergency, in which both the pilot and the controller were faced with a stressful situation requiring their full attention, there was no need to spend time on matters that Anders obviously did not seek help on. Hill was entitled to rely on Anders' "ya" response and not belabor weather information. Moreover, even if Hill had breached a duty to give weather information, there is no evidence that any weather condition led to the crash of the airplane. As earlier noted, eyewitnesses saw the plane flying straight toward the airport with wings level just before the crash. Any

failure to provide one or more items of weather information was not shown to have contributed to the crash in any way.[39]

2. *PIREP*

Relying on Fagras's opinion testimony, Plaintiffs also allege that the Daytona controllers breached a duty to relay to Anders a pilot's weather report (PIREP) of a 600-foot ceiling near the Flagler airport as N375B came in for landing. While it is correct that the controllers did not relay that PIREP to Anders, the PIREP was stale and inconsistent with other, more recent information about the ceiling that was identical to the ceiling report that Anders had already been given.

The Manual indeed requires controllers to timely pass on reports of weather they receive from pilots that are pertinent to flight safety. Paragraph 2-6-3, titled "PIREP Information," provides in part: "Significant PIREP information includes reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, and other conditions pertinent to flight safety. . . . d. Handle PIREPs

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[39] Plaintiffs offered no evidence suggesting any weather condition altered Anders' piloting decisions or contributed to the crash in any way. Nor did they show that Anders for any reason became spatially disoriented. Thus, this case is unlike those cited by Plaintiffs, in which there was evidence of spatial disorientation or altered piloting decisions. See Worthington v. United States, 21 F.3d 399, 403 (11th Cir. 1994) ("The record provides uncontroverted expert testimony that decedent experienced spatial disorientation before the crash."); Ingham v. Eastern Air Lines, Inc., 373 F.2d 227, 236 (2d Cir. 1967) (noting the trial judge's observations that "if the crew had known of correct conditions, they might have maneuvered the plane differently, and could have been ready and able at an earlier time to execute a missed approach"); Martin v. United States, 586 F.2d 1206, 1209 (8th Cir. 1978) (noting trial court's finding, in case where ceiling at airport had dropped from three hundred feet to zero, that the pilots "bec[a]me spatially disoriented as to their altitude with the result that the plane crashed into trees shortly before the runway"); Himmler v. United States, 474 F. Supp. 914, 918 (E.D. Pa. 1979) (noting that that "[a] pilot suffering from spatial disorientation will have false and misleading sensations as to what the aircraft under his control is actually doing").

as follows: 1. Relay pertinent PIREP information to concerned aircraft in a timely manner." (Manual ¶ 2-6-3).

Palmer informed Anders at 2:08:04 that the Flagler Airport had a broken 900-foot ceiling. (Mateo Tr. at 11; Mateo Audio at 1908:04). That was the official 1:50 p.m. Flagler airport ceiling provided on Palmer's Information Display System (IDS) above his radarscope, and the 900-foot measurement was made by a laser ceilometer that was part of the Automated Weather Observing System (AWOS) at the Flagler airport. The laser ceilometer measures the distance from the ground to the bottoms of the clouds overhead. Measurements are taken in thirty minute cycles, and it is possible that the ceilings vary during the cycle. The algorithm integrates the last thirty minutes of data, with double weight given to data accumulated in the most recent ten minutes. This information is collected in thirty-second bins and is reviewable at thirty- or sixty-second intervals. Accumulation of data in this way results in more accurate measurement of cloud cover not just immediately over the ceilometer, but also over an area extending three to five miles. (See Trial Tr. Day 3 (p.m.), Doc. 136, at 39 (Branscome Test.)).

At 2:14:08, as N375B was descending toward Flagler Runway 29, Raulerson called the Flagler tower for a weather update, specifically asking about the weather to the east of the airport. (CI-O Tr., Pls.' Ex. 14E, at 3; CI-O Audio, Pls.' Ex. 23, at 06:23[40]). Flagler controller[41] Dwayne Glass answered, "Um I got maybe three miles maybe four miles [visibility] to the east and the ceiling was reported by the uh the last aircraft you sent in here

[40] As noted earlier, this audio exhibit does not provide the actual times of day at which transmissions were made, and the cited time represents the point on this audio exhibit at which the transmission appears.

[41] The Flagler tower is a privately contracted tower, and controllers there are not FAA employees.

about 600 feet, I'm getting 900 broken listed on my AWOS right now." (CI-O Tr., Pls.' Ex. 14E, at 3; CI-O Audio, Pls.' Ex. 23, at 06:27–06:41). Glass did not mention when the "last aircraft" had given that report, and Raulerson did not ask. It is undisputed that the PIREP was not passed along to Anders. Some evidence at trial suggested that the PIREP was made to the Flagler tower at either 1:05 p.m. or 1:17 p.m.—an hour or more before the final approach of N375B—when a plane was practicing approaches to Runway 24 and Runway 29 at Flagler.

In arguing that it was negligent for the Daytona controllers not to pass the PIREP on to Anders, Plaintiffs rely heavily on the fact that Glass, who is a certified weather observer, wrote a written statement on January 8—four days after the crash—stating that he told Raulerson the ceiling was 600 feet when he spoke to him at 2:14:12—not mentioning that the 600-foot report came from a pilot. (See Glass Statement, Pls.' Ex. 43). They argue that a trained weather observer observed and reported the ceiling as 600 feet and that therefore the controllers were obligated to share that information with Anders.

But the transcript and audio recording of the telephone conversation between Raulerson and Glass establish that Glass did not tell Raulerson that he observed the ceiling to be 600 feet. Instead, he told Raulerson that "the last aircraft [Daytona] sent in" to Flagler airport had reported a 600-foot ceiling but that he was "getting 900 broken listed on [the] AWOS right now," suggesting not that he was observing a 600-foot ceiling but instead that he did not disagree with the 900 feet showing on the AWOS at that moment. Glass testified that he would not have passed on information he believed to be incorrect, (Trial Tr. Day 4 (p.m.), Doc. 142, at 140), and he admitted on cross-examination that the transcript and recording of his conversation with Raulerson was more accurate than his written statement,

(id. at 123).

And if Glass had personally observed a significant variance in cloud cover from that registered by the ceilometer, he was required to make a special notation of that change for the benefit of controllers. (See Trial Tr. Day 4 (p.m.), Doc. 142, at 128–29). He did not enter such a note. (Id.). The AWOS reading of the Flagler ceiling at 12:50 p.m.—shortly before the 600-foot PIREP was reported—was 700 feet. (See Gov't's Ex. 64; Trial Tr. Day 7 (a.m.), Doc. 159, at 57 (Hoxit Test.)). Glass was required to update the 700-foot report with a 600-foot update if he believed the ceiling was actually 600 feet instead of 700 feet, but he did not. (Trial Tr. Day 4 (p.m.), Doc. 142, at 131). In sum, the evidence does not establish that Glass observed the ceiling at 600 feet, and more importantly, he did not tell Raulerson that he was observing he ceiling as 600 feet. The AWOS reported the ceiling at both 1:50 pm. and 2:14 p.m. as 900 feet. What Glass told Raulerson was consistent with what the Daytona controllers already knew and what Anders had already been told, and the Daytona controllers did not breach a duty by not passing along the PIREP.

And in any event, Plaintiffs failed to establish a causal connection between a failure to pass along the PIREP and the crash. Again, Glass and another eyewitness described seeing the plane flying in VFR conditions with wings level just before the crash. Regardless of whether the ceiling was actually 600 feet or 900 feet,[42] the plane made it below the

[42] The evidence that the 2:14 AWOS reading of 900 feet was correct and fairly represented the ceiling over and around the Flagler airport during N375B's approach is compelling. The AWOS consistently reported the ceiling as 900 feet at 1:50 p.m., 2:14 p.m., and 2:50 p.m. And seventeen seconds before Raulerson learned of the PIREP, N375B was east-northeast of the Flagler airport at 2700 feet, and Anders reported breaks in the clouds—he could see the ground. (See North Tr. at 4). At 1800 feet, while just off the coast over the ocean on the base leg, Anders reported that he could see the water. (North Tr. at 5; North Audio at 1914:57). These reports are consistent with the opinion of the Government's expert meteorologist, Dr. Ray Hoxit, that the ceiling to the east of the

clouds and was lined up to land. Plaintiffs did not show that any "surpise" in the ceiling height resulted in Anders becoming spatially disoriented or otherwise affected his piloting. Plaintiffs' PIREP-based claim fails.

3. Safety Alert

At 2:16:43, as N375B was approaching Flagler's Runway 29 at Flagler, the plane descended to 500 feet and a visual "low altitude" warning—indicated with "LA"—appeared on Hill's radarscope, and an audible warning sounded in the Daytona TRACON; this is known as a minimum safe altitude warning ("MSAW"). (See North Audio at 1916:43; STARS File, Pls.' Ex. 58, at 4). Hill did not issue a safety alert to Anders based on this MSAW, and Plaintiffs contend that an alert was required and that thus Hill's conduct fell below the standard of care. This argument is without merit.

Paragraph 2-1-6 of the Manual, tilted "Safety Alert," directs controllers to "[i]ssue a safety alert to an aircraft if you are aware the aircraft is in a position/altitude which, *in your judgment*, places it in unsafe proximity to terrain, obstructions, or other aircraft." (Manual ¶ 2-1-6 (emphasis added)). Specifically with regard to terrain and obstructions, this paragraph instructs controllers to "[i]mmediately issue/initiate an alert to an aircraft if you are aware the aircraft is at an altitude which, *in your judgment*, places it in unsafe proximity to terrain/obstructions." (Id. ¶ 2-1-6(a)) (emphasis added).

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airport was 900 feet at that time. (See Trial Tr. Day 7 (a.m.), Doc. 159, at 19 & 58). Hoxit demonstrated this by showing that locations closer to the coast and north of Ormond had higher ceilings than those further inland. (See Trial Tr. Day 7 (a.m.), Doc. 159, at 16–19). Furthermore, Plaintiffs' meteorological expert, Lee Branscome, acknowledged that the ceilometer's measurements of ceiling are representative of an area extending three to five miles out from the ceilometer—not just directly above it. (Trial Tr. Day 3 (p.m.), Doc. 136, at 39 (Branscome Test.)). In sum, although the actual conditions have not been shown to be relevant to the breach of duty issue, if the controllers had passed the stale PIREP on to Anders, that information would have been misleading because the ceiling east of the Flagler airport was closer to 900 feet than 600 feet.

At trial, Fagras emphatically insisted that there was no leeway in the requirement that controllers issue a safety alert when the MSAW sounds:

> Q: As a controller, are you required to give the pilot a low altitude alert when the MSAW goes off?
>
> A: Yes, sir, I am.
>
> Q: Is there any leeway there?
>
> A: Not when the alarm triggers, no, sir.
>
> Q: Is that in the procedures manual anywhere?
>
> A: It is in the [Manual].
>
> . . . .
>
> Q: And the failure to issue a safety alert to a pilot who may be under the MDA on an instrument approach that was illegal and not issue him a low altitude alert, is that a violation of the standard of reasonable care for a controller?
>
> A: Yes, sir. It also represents his first priority of duty.

(Trial Tr. Day 1 (p.m.), Doc. 124, at 129). But earlier in his testimony—when asked, "What is a safety alert?"—Fagras responded, "A safety alert is anytime a controller, *in his judgment*, he sees a situation where he believes the aircraft might be in harm's way of collision with another aircraft, with an antenna, with terrain, and he's required to issue that safety alert at that time." (Trial Tr. Day 1 (a.m.), Doc. 122, at 21 (emphasis added)).

Although Fagras insisted that when the MSAW goes off an altitude warning to the pilot is required, the plain wording of the Manual contradicts Fagras's later testimony that a safety alert is absolutely required when the MSAW activates. The controller is to alert the pilot when the controller believes—"in [his] judgment"—that the aircraft is in an unsafe situation due to proximity to terrain or obstructions. And a note to paragraph 2-1-6 explains that "[r]ecognition of situations of unsafe proximity may result from [MSAWs], automatic

altitude readouts, . . . pilot reports," or other indicators. (Manual ¶ 2-1-6 Note 2). The section does not distinguish among the type of indicator, and as to each possible source of information the controller is to use his "judgment" as to whether the aircraft is in unsafe proximity to terrain. The Court rejects Fagras's testimony that a safety alert is required whenever an MSAW goes off. Turner credibly testified to the contrary. (Trial Tr. Day 7 (p.m.), Doc. 164, at 50–52)).

When aircraft are close to the ground for landing—particularly on a "short final" approach—the MSAW alarm routinely sounds and there is no reason to suspect that the pilot and passengers are in danger. (See, e.g., Trial Tr. Day 3 (a.m.), Doc. 133, at 31 & 83 (Hill Test.)). By the time the MSAW alert sounded in the TRACON at 2:16:43, N375B was flying below the cloud cover in VFR conditions—whether the ceiling was 900 feet or 600 feet. At that point, N375B was fewer than three miles from the airport at an altitude of 500 feet. The aircraft continued to fly for about two minutes before it crashed sometime between 2:18:27 and 2:19:00. Because N375B was approaching the Flagler airport for landing and was by all accounts in VFR conditions, there was no reason for Hill to alert Anders. Moreover, as Hill explained, providing a low altitude warning to Anders at that point would have been a distraction to an already very busy and distressed pilot. (Id. at 78). And again, in light of the eyewitness testimony that the plane was approaching the airport with wings level in VFR conditions just prior to the crash, no causal link has been shown to the lack of a safety alert.

4. Missed Approach Procedure

Plaintiffs also complain that Anders was not given a "missed approach procedure" during the surveillance approach. This is "[t]he procedure to be followed if the approach cannot be continued." (Manual at Pilot/Controller Glossary at PCG M-5).

Hill did not provide Anders with a missed approach procedure until after he lost radio contact with N375B. (See North Tr. at 7; North Audio at 1917:25 ("If you don't have the airport in sight climb straight ahead to two thousand.")). Hill explained that he intended to give the missed approach procedure to Anders at one mile out if Anders had not reported "airport in sight" by then. (Trial Tr. Day 3 (a.m.), Doc. 133, at 24–25).

Under the circumstances of this case, as Plaintiff's witnesses acknowledged, there was no possibility of a missed approach procedure being successfully executed. As Mackey attested, the procedure for executing a missed approach or "go around" would have required "full throttle," and going to full throttle in an airplane with zero oil pressure would cause the engine to "probably very quickly come apart." (Trial Tr. Day 4 (p.m.), Doc. 142, at 24–25). And in questioning of Fagras, Plaintiffs' counsel acknowledged that "chances are the pilot was never gonna be able to do a missed approach . . . because his engine was bad." (Trial Tr. Day 1 (p.m.), Doc. 124, at 93).

Because executing a missed approach procedure was not possible for this aircraft, and because there is no evidence that not issuing the missed approach procedure in any way contributed to the crash, Plaintiffs' contentions about Hill's failure to give a missed approach procedure are unavailing.

5. Lost Communications Procedure

Plaintiffs similarly contend that Hill failed to provide Anders with a lost communications procedure—that is, instructions on what to do if communication with Hill was lost during the approach. (See Manual at Pilot/Controller Glossary at PCG L-2 to PCG L-3 ("Radar controllers issue procedures for pilots to follow in the event of lost communications during a radar approach when weather reports indicate that an aircraft will likely encounter IFR weather conditions during the approach.")).

Here, Hill attempted to tell Anders to contact the Flagler tower and provided the frequency at 2:17:25—after N375B was set up for "four miles straight in" to Runway 29 and Hill had not heard back from Anders for over a minute. (North Tr. at 6–7; North Audio at 1917:25). Fagras testified that Hill was required to give a lost communications procedure prior to joining the final approach and that it is not reasonable for a controller to issue the procedure after communication has already been lost. (Trial Tr. Day 1 (p.m.), Doc. 124, at 94 & 130–31). At trial, Hill explained:

> The lost communications procedure for this flight was pretty much null and void. . . . [T]here was no part of [the lost communications procedure] that the pilot could have done. The first . . . part of the lost communications [procedure], if no transmission received for a one-minute pattern, or if 15 seconds off final attempt, contact tower or proceed VFR. Well, obviously we were in . . . IFR conditions from 900 feet up to 7,000 feet. If at any point he did encounter . . . VFR conditions and was able to proceed to the field VFR, I would have expected him to do that whether he was talking to me or not. . . .
>
> The second part of the lost communications procedure is if he's unable to proceed VFR, to proceed in a direct affix [sic] and execute an instrument approach. He reported that he had no RNAV capabilities. . . . So that, too, was something the pilot couldn't do.

(Trial Tr. Day 3 (a.m.), Doc. 133, at 25–26).

Although Hill did not provide Anders with a lost communications procedure before communication with Anders was actually lost, Plaintiffs have not established any causal connection between the failure to provide the procedure and the crash. Anders was in or nearing VFR conditions when communication was lost, and again, the plane was on course to land when it crashed within sight of the airport. And as noted by Hill, Anders was not able to execute an instrument approach in any event.

E. Blair's Statement

Plaintiffs also attempt to seize upon a statement made by Bruce Blair, the Daytona TRACON's facility manager, as an admission of negligence. Within a few hours of the

crash, Blair spoke by telephone to FAA safety officials. During that conversation, Blair made the following statement:

> We have got some concerns concerning emergency procedures, proficiency training regarding that. We need to reenforce weather and the importance of providing that throughout this this—throughout the facility and how easy it is to get trapped into attempting to do the right thing and leading somebody the wrong way. Even if you feel like you don't have any options, we still follow our procedures.

(Telcon Tr., Pls.' Ex. 52B, at 13). Although Plaintiffs' counsel represents that this statement was an "admission" made after Blair conducted a "personal investigation" of the incident, (Pls.' Mem., Doc. 172, at 2), that assertion is not borne out by the record. The statement is a thoughtful contemplation shortly after the incident of what might have gone wrong and what might need to be done in the future, but it does not constitute an admission.

The NTSB did do an investigation, and the FAA Headquarters Executive Summary of that investigation stated:

> The NTSB's preliminary findings identified that although the controllers issued a Surveillance Radar Approach (ASR) to an airport without a published ASR approach, they (NTSB) felt that under the circumstances the controllers were left with no other options.

(FAA Memorandum, Pls.' Ex. 52D). This statement is not an indictment of the Daytona controllers' decisions but rather an endorsement. And later, Blair approved Letters of Commendation to Palmer and Hill for the assistance they gave those aboard N375B. (See Raulerson Dep. at 127–30). In sum, the Court rejects Plaintiffs' assertion that Blair's statement acknowledges a breach of duty.

F. Causation

In addition to failing to establish that the Daytona controllers breached a duty of care, Plaintiffs also failed to show that any of the myriad alleged acts and omissions of the controllers was a proximate cause of the crash. Plaintiffs' failure to prove proximate

causation is summed up by Plaintiffs' expert and advocate, Fagras: "I can't tell you we would have had a better outcome if we had picked a different plan because I don't think anyone can." (Trial Tr. Day 1 (p.m.), Doc. 124, at 143 (Fagras Test.)). In this short, simple sentence, Fagras himself attested that even if the controllers erred in assisting N375B, no one can prove that the mistake was a proximate cause of the crash. On this one point—that no one could tell whether a different plan would have resulted in a different outcome—Fagras is credible. Whether the crash of N375B just short of Runway 29 was because of mechanical failure, pilot error, or some other cause was not established at trial. But what is clear is that the conduct of the controllers was not a contributory cause.

The Plaintiffs' causation problems begin with their failure to present a coherent, reliable theory as to if, when, and why N375B's engine failed and why the plane crashed. Plaintiffs did not call an accident reconstruction expert but instead relied on Mackey. For reasons already stated, the Court finds that the methodology Mackey used in arriving at his amended opinions about N375B's engine is not reliable. His recently formed conclusions are contrary to those disclosed to counsel before trial pursuant to the Federal Rules of Civil Procedure, and Plaintiffs' counsel failed to file an amended expert report as required by Rule 26(e)(2). This failure further calls into question the credibility of Mackey's testimony regarding the alleged engine failure.

At best, Mackey's opinion is based on impermissibly stacked inferences. Mackey is a qualified aircraft mechanic and an extraordinary pilot, but he offered little more than circumstantial evidence in support of his theory of engine failure. His testimony was vague. His explanation as to why the propeller went flat was as tenuous as his testimony about the oil escaping from the hole in the connecting rod. He was short on details. And when

he was asked when the engine failed, Mackey said, "I don't know." (Trial Tr. Day 4 (p.m.), Doc. 142, at 34). From his noncommittal responses, the Court cannot determine why N375B crashed.

Moreover, even findings that the controllers usurped Anders' authority by directing him to fly to Flagler's Runway 29 and that N375B sharply descended and crashed because it lost power due to mechanical failure—findings that the Court has not made—would not establish causation. This is because Plaintiffs presented no credible evidence that Anders would have been able to land sooner at any other airport or in any other fashion. As earlier noted, there is no reliable evidence that N375B would have been able to execute any of the landings described by Fagras and Mackey at the Ormond airport or any other airport.

In sum, even if Plaintiffs had established a breach of duty, their claims would fail on the element of causation.

G. Pilot Negligence

The Government encourages the Court to find that pilot negligence was the proximate cause of the crash because Anders knew or should have known that N375B was not airworthy. The parties agree that the Federal Aviation Regulations (FARs), which are codified in part of Title 14 of the Code of Federal Regulations, "have the 'force and effect of law,'" and they are evidence of "what a reasonable pilot would have done under the circumstances." Campbell v. Keystone Aerial Surveys, Inc., 138 F.3d 996, 1002–03 (5th Cir. 1998) (quoting United States v. Schultetus, 277 F.2d 322, 327 (5th Cir.1960)). "Rule one [of the FARs] makes it clear that the pilot in command, like the ship captain, has the ultimate responsibility for the safety of his plane and his passengers and must comply with the extensive body of regulations published by the FAA." Cappello v. Duncan Aircraft Sales of Fla., Inc., 79 F.3d 1465, 1469 (6th Cir. 1996) (citing 14 C.F.R. § 91.3). The FARs prohibit

a person from operating a civil aircraft that is not in an airworthy condition, and the pilot is responsible for determining that the aircraft is in a condition for safe flight prior to takeoff. See 14 C.F.R. § 91.7.

There is considerable evidence to call Anders' judgment and the airworthiness of N375B into question. It appears that Anders was unaware of the weather along his planned route up the Florida peninsula flying VFR. The National Weather Service had issued an advisory (AIRMET) putting airmen on notice that ceilings were below 1000 feet and visibility was less than three statute miles over much of the Florida peninsula. (See AIRMET, Gov't's Ex. 66, at 1; Trial Tr. Day 3 (p.m.), Doc. 136, at 29–30 (Branscome Test.); Trial Tr. Day 6 (p.m.), Doc. 157, at 80–83 (Hoxit Test.)). That advisory was issued at 9:45 a.m. EST (14:45 Zulu) and was in effect when Anders left Ft. Pierce heading north toward Knoxville—indeed it was in effect even before he arrived in Ft. Pierce from the Bahamas—and it stated that it was in effect until 4:00 p.m. that day. (See Gov't's Ex. 66 at 1; see also Trial Tr. Day 6 (p.m.), Doc. 157, at 83 (Hoxit Test.)). Having made the decision to fly, Anders should have been prepared to make an emergency landing along the way. And, although not a requirement, it is surprising that under the circumstances Anders did not have a GPS or other distance-measuring equipment (DME) on board. And of course, the description of N375B before it left Ft. Pierce leads one to believe that it was not well maintained and leaked oil.

These are concerns, but the Government did not call a piloting expert to render an opinion on the question whether Anders was negligent. Also, the Court cannot conclude from the evidence presented that N375B was not airworthy. And the Court having found that Plaintiffs' negligence claims fail, there is no reason to further address the

Government's assertions of pilot negligence.

V. CONCLUSION

As set forth above, the Court finds that Plaintiffs did not establish their negligence claims by a preponderance of the evidence. Thus, the Government prevails in this case. The Court's findings under Federal Rule of Civil Procedure 52(a) render moot the Government's *ore tenus* Rule 52(c) motion for judgment on partial findings. Accordingly, it is **ORDERED** as follows:

1. The Clerk is directed to enter a judgment providing that Plaintiffs Aubrey Anders, as Administrator of the Estate of Michael R. Anders, and Darrel Joseph, as Administrator of the Estate of Charisse M. Peoples, take nothing on their claims against the United States.

2. The Government's *ore tenus* Rule 52(c) motion (see Doc. 153) is **DENIED as moot**.

3. Plaintiffs' Renewed Motion to Strike the Deposition Transcript of Gary Shimon (Doc. 119) is **DENIED as moot**.

4. After entry of judgment as set forth in paragraph 1, the Clerk shall close this case.

DONE and **ORDERED** in Orlando, Florida, on March 31st, 2018.

JOHN ANTOON II
United States District Judge

Copies furnished to:
Counsel of Record