



Aviation Investigation Factual Report

Location:	Powhatan, Virginia	Incident Number:	OPS14IA007
Date & Time:	April 29, 2014, 15:39 Local	Registration:	UNK
Aircraft:	Boeing 757	Aircraft Damage:	Minor
Defining Event:	Turbulence encounter	Injuries:	4 Minor
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Factual Information

AWE815 was en route from Orlando, Florida, to Philadelphia, Pennsylvania, and contacted ZDC sector 16 at 1930:42, reporting level at FL390. At 1935:04, the R16 controller instructed AWE815 to descend and maintain FL350. The pilot acknowledged. At 1939:02, the controller instructed AWE815 to cross SHONA intersection at FL310. The pilot began to acknowledge, transmitting, "SHONA at 310 Cactus 8 uh 15, we're in...we're in severe turbulence." At 1939:42, the pilot of AWE815 transmitted, "OK – say again for Cactus 815?" The controller reissued the crossing restriction at SHONA, the pilot acknowledged, and the controller then asked the pilot for further information about the reported turbulence. At 1939:56, the pilot responded, "Well, it lasted about, uh, wherever we just were, just about uh, ten south of Flat Rock, and it lasted about 30 seconds." The controller asked the pilot to confirm that the event occurred between FL370 and FL360, and the pilot did so. The controller then asked the pilot if he needed anything else, and the pilot replied, "We just need to catch our breath here." There were no further exchanges about the turbulence encounter with AWE815, and the pilot was instructed to contact the next sector at 1944:05. The crew did not report any damage or injuries before changing frequencies.

At 1938:34, JIA4678 checked in with the R16 controller, reporting climbing through FL270 to FL330. At 1941:14, after the severe turbulence report from AWE815, the R16 controller advised the crew of JIA4678 that they could deviate right or left as they deemed necessary, adding that a report of severe turbulence had occurred at their 12:00 position and 45 to 50 miles. The pilot responded, "Appreciate it – deviations approved." The controller continued, "...and uh yeah 50 miles straight ahead and he was out of 37 for 36." At 1944:22, the pilot of JIA4678 asked, "Any chance of direct COYLE?" At 1944:52, after talking to another aircraft, the controller responded, "I can't do direct COYLE – I can do direct AGARD." The crew accepted direct AGARD, and the controller continued, "If you need to deviate to the right that's approved, go direct AGARD when able, that's 15 degrees right about." The pilot accepted the clearance and approval of the deviation. At 1947:07, the controller asked the pilot of JIA4678, "How's the ride through the weather?", and the pilot responded, "Uh, pretty smooth." At 1948:06, JIA4678 called and the controller responded, "Go ahead." The pilot then stated, "Uh we're reporting severe turbulence, and we'd like to level off here at FL320." The controller acknowledged the report and told the crew to do what they needed to do, including deviate right "to get out of it," and to go direct AGARD when able. The pilot responded, "AGARD when able, right turn, and uh, does that look better?" The controller replied, "Yeah," and again told the crew to, "...do what they needed to do to get out of it."

At 1948:53, the controller instructed the pilot of AWE778 to fly heading 010 to go around the area where they turbulence reports had occurred. The pilot asked if a lower altitude would be better, and the R16 controller replied that he did not know because there were no other aircraft at lower altitude to provide a report. The pilot then requested FL270, and was assigned FL280. The controller then asked the crew of JIA4678 to advise when they were "out of it." The crew reported that they were out, and were climbing to FL330. They additionally recommended that aircraft stay away from the area 10 miles south of Flat Rock. JIA4678 was transferred to the next sector at 1951:11. The crew did not report any damage or injuries.

At 1950:17, the R16 controller coordinated with another sector to accommodate a northerly deviation for AWE778, stating, "I'm going to run north around that weather and then go to Nottingham, I've got severe turbulence in that cloud there."

During the approximately 1 3/4 hour session on the R16 position, no compliance with FAA order 7110.65, "Air Traffic Control", paragraph 2-6-4, "Weather and Chaff Services," was noted, although there were clearly areas of precipitation present in the sector as evidenced by review of recorded WARP/NEXRAD data, comments about weather made by the controller to several pilots, and numerous pilot requests for weather deviations. According to information provided by the facility support manager for quality control, ZDC had no program for live monitoring of weather services to ensure that displayed precipitation information was being provided to flight crews as required.

Two pilot reports about the severe turbulence encounters were submitted by the R16 controller following the incidents.

According to information supplied by American Airlines, all four flight attendants and several passengers aboard AWE815 requested medical examinations following the flight, although none of them reported injuries meeting the standard for an aircraft accident. Two of the flight attendants remained in a non-duty status for at least three weeks after the incident. The aircraft sustained hail damage and required replacement of the radome.

For further information, see the air traffic control group chairman's report in the docket for this case.

Information

Certificate:	Age:
Airplane Rating(s):	Seat Occupied:
Other Aircraft Rating(s):	Restraint Used:
Instrument Rating(s):	Second Pilot Present:
Instructor Rating(s):	Toxicology Performed:
Medical Certification:	Last FAA Medical Exam:
Occupational Pilot:	Last Flight Review or Equivalent:
Flight Time:	

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	UNK
Model/Series:	757	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal; Transport	Serial Number:	00000
Landing Gear Type:		Seats:	
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	
Airframe Total Time:		Engine Manufacturer:	
ELT:		Engine Model/Series:	
Registered Owner:	NA	Rated Power:	
Operator:	NA	Operating Certificate(s) Held:	Flag carrier (121)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/ Convective
Wind Direction:		Turbulence Severity Forecast/Actual:	/ Severe
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Orlando, FL (MCO)	Type of Flight Plan Filed:	IFR
Destination:	Philadelphia, PA (PHL)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Class A

Wreckage and Impact Information

Crew Injuries:	4 Minor	Aircraft Damage:	Minor
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Minor	Latitude, Longitude:	37.540058,-77.919136(est)

Administrative Information

Investigator In Charge (IIC): Dunham, Scott

Additional Participating Persons:

Report Date: October 9, 2014

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=89220>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).