

Aviation Investigation Factual Report

Location:	Baltimore, Maryland	Incident Number:	OPS08IA002
Date & Time:	December 2, 2007, 19:22 Local	Registration:	N781CA
Aircraft:	Bombardier, Inc. CRJ1	Aircraft Damage:	None
Defining Event:		Injuries:	53 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Factual Information

On December 2, 2007, at approximately 1922 Eastern Standard time (EST), Comair, Inc., flight 5412 (COM5412), N781CA, a Bombardier Canadair Regional Jet, departed runway 15R and over flew America West Airlines flight 83 (AWE 83), N659AW, an Airbus Industrie A-320, that had landed on runway 10, at Baltimore/Washington International Thurgood Marshall Airport (BWI), Baltimore, Maryland. Both aircraft were operating as a 14 Code of Federal Regulations Part 121 flight and both crews had filed instrument flight rules flight plans. There were no injuries to the occupants of either aircraft and neither aircraft was damaged. The incident occurred during night visual flight rules conditions.

About 1919:07, when AWE 83 was approximately six mile final for landing on runway 10, the BWI local controller cleared AWE 83 to land. The pilot of AWE 83 acknowledged the landing clearance.

About 1920:33, as evidenced by BWI radar data and Airport Movement Area Safety System (AMASS) data, AWE 83 was two and one half mile final to runway 10 when the local controller cleared COM5412 for takeoff on runway 15R. At the time of the takeoff clearance, COM5412 was situated on taxiway A about 500 feet south of the departure end of runway 15R. The pilot of COM5412 acknowledged the takeoff clearance.

About 1921:29, the ASDE (airport surface detection equipment) tower display showed the runway 10 red hold bars illuminated for AWE 83 on final approach to runway 10.

About 1921:38, the ASDE tower display showed the runway 15R red hold bars illuminated for COM5412 departing on runway 15R.

About 1921:47, the ASDE tower display alerted with both visual and aural alarms. According to the local controller, from the back of the tower cab, an aural alert announced, "WARNING: AWE83, runways 10, 15R, converging." The AMASS also displayed numerous visual alarms such as a textual warning box, red hold bars for both runways indicating restricted runway/taxi crossing points, and purple circles around each aircraft as they approached the intersection of runways 10 and 15R. According to the local controller, he had turned his back from the runway operations to ask another controller to adjust the volume on the Domestic Events Network (DEN) line when he heard the AMASS alert. As the local controller turned back towards the local control position, he looked at the ASDE display and saw the circles around the two targets. After recognizing the situation, the local controller said, "Comair, Comair, cancel, cancel or" According to the COM5412 pilot's statement, they were at V1/Vr speed passing taxiway F on runway 15R, when the local controller attempted to instruct the crew to cancel takeoff clearance; however, it was too late to abort the takeoff. COM5412 crossed in front of AWE83, as AWE 83 proceeded through the intersection of runways 10 and 15R. According to

the FAA Runway Safety office, COM5412 missed AWE 83 by 400 feet laterally and 400 feet vertically. The FAA Runway Safety Office classified the incident as category "B" event.

About 1922:17, the local controller instructed AWE83 to turn left on runway 4/22, and advised the crew to contact ground control. The pilot of AWE 83 acknowledged.

PERSONNEL INFORMATION

The BWI ATCT local controller was appropriately certified and qualified to perform his assigned duties. He received his control tower operator's certificate in 1981 and had been working at as an air traffic controller for 26 years. Certification and experience for the captains and first officers of both aircraft was not requested.

METEOROLOGICAL INFORMATION

The BWI special weather observation for 1917EST was: Wind calm, visibility 5 statute miles, light rain and mist, sky conditions ceiling broken at 1,000 feet, overcast 3,000 feet, temperature 39, dew point 39 and altimeter 30.02 inches.

WRECKAGE AND IMPACT INFORMATION

There was no damage reported for either aircraft.

ADDITIONAL INFORMATION

Airport Information

BWI serves airline, air taxi, military, and general aviation aircraft. The annual air activity averages 307,000 flight operations per year. BWI had four runways, 10/28, 15L/33R, 15R/33L and 4/22. Runway 10/28 was 10,502 feet long and 200 feet wide with high intensity runway lights (HIRLS). The runway surface consisted of an asphalt/grooved surface in fair condition. Runway 15R/33L was 9,501 feet long and 150 feet wide with HIRLS. Runway 15R/33L surface consisted of an asphalt/grooved surface in fair condition. The airport field elevation was 146 feet msl. The tower was equipped with an AMASS.

Pilot Information

Certificate:	Age:
Airplane Rating(s):	Seat Occupied:
Other Aircraft Rating(s):	Restraint Used:
Instrument Rating(s):	Second Pilot Present: Yes
Instructor Rating(s):	Toxicology Performed: No
Medical Certification:	Last FAA Medical Exam:
Occupational Pilot:	Last Flight Review or Equivalent:
Flight Time:	

Co-pilot Information

Certificate:	Age:
Airplane Rating(s):	Seat Occupied:
Other Aircraft Rating(s):	Restraint Used:
Instrument Rating(s):	Second Pilot Present: Yes
Instructor Rating(s):	Toxicology Performed: No
Medical Certification:	Last FAA Medical Exam:
Occupational Pilot:	Last Flight Review or Equivalent:
Flight Time:	

Aircraft and Owner/Operator Information

Aircraft Make:	Bombardier, Inc.	Registration:	N781CA
Model/Series:	CRJ1	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	
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:		Rated Power:	
Operator:	COMAIR INC	Operating Certificate(s) Held:	Commuter air carrier (135)
Operator Does Business As:	Wholly Owned subsidiary of Delta Airlines, Inc.	Operator Designator Code:	COMR

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	BWI, 146 ft msl	Distance from Accident Site:	
Observation Time:	19:17 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	5 miles
Lowest Ceiling:	Broken / 10 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	4°C / 4°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	Baltimore, MD (BWI)	Type of Flight Plan Filed:	IFR
Destination:	MA (BOS)	Type of Clearance:	IFR
Departure Time:	19:21 Local	Type of Airspace:	Class B

Airport Information

Airport:	BALTIMORE-WASHINGTON INTL BWI	Runway Surface Type:	Asphalt
Airport Elevation:	146 ft msl	Runway Surface Condition:	Wet
Runway Used:	15R	IFR Approach:	Unknown
Runway Length/Width:	9501 ft / 150 ft	VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	None
Passenger Injuries:	50 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	53 None	Latitude, Longitude:	39.175277,-76.668334

Administrative Information

Investigator In Charge (IIC): Hall, Hilton

Additional Participating Persons:

Report Date: January 24, 2008

Last Revision Date:

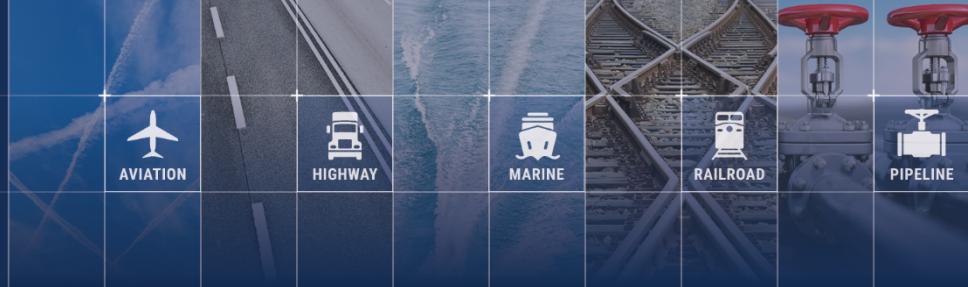
Investigation Class: [Class](#)

Note: The NTSB traveled to the scene of this incident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=67195>

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](#).



Aviation Investigation Factual Report

Location:	Baltimore, Maryland	Incident Number:	OPS08IA002
Date & Time:	December 2, 2007, 19:22 Local	Registration:	N659AW
Aircraft:	Airbus Industrie A320	Aircraft Damage:	None
Defining Event:		Injuries:	131 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Factual Information

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ADDITIONAL INFORMATION

Airport Information

BWI serves airline, air taxi, military, and general aviation aircraft. The annual air activity averages 307,000 flight operations per year. BWI had four runways, 10/28, 15L/33R, 15R/33L and 4/22. Runway 10/28 was 10,502 feet long and 200 feet wide with high intensity runway lights (HIRLS). The runway surface consisted of an asphalt/grooved surface in fair condition. Runway 15R/33L was 9,501 feet long and 150 feet wide with HIRLS. Runway 15R/33L surface consisted of an asphalt/grooved surface in fair condition. The airport field elevation was 146 feet msl. The tower was equipped with an AMASS.

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:	Airbus Industrie	Registration:	N659AW
Model/Series:	A320	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	
Landing Gear Type:	Retractable - Tandem	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:		Rated Power:	
Operator:	AMERICA WEST AIRLINES INC	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	US Airways	Operator Designator Code:	AWXA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	BWI,146 ft msl	Distance from Accident Site:	
Observation Time:	19:17 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	5 miles
Lowest Ceiling:	Broken / 10 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	4°C / 4°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	Phoenix, AZ (PHX)	Type of Flight Plan Filed:	IFR
Destination:	Baltimore, MD (BWI)	Type of Clearance:	IFR
Departure Time:	13:13 Local	Type of Airspace:	

Airport Information

Airport:	BALTIMORE-WASHINGTON INTL BWI	Runway Surface Type:	Asphalt
Airport Elevation:	146 ft msl	Runway Surface Condition:	Wet
Runway Used:	15R	IFR Approach:	Unknown
Runway Length/Width:	9501 ft / 150 ft	VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	5 None	Aircraft Damage:	None
Passenger Injuries:	126 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	131 None	Latitude, Longitude:	39.175277,-76.668334

Administrative Information

Investigator In Charge (IIC): Hall, Hilton

Additional Participating Persons:

Report Date: January 24, 2008

Last Revision Date:

Investigation Class: [Class](#)

Note: The NTSB traveled to the scene of this incident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=67195>

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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](#).