



Aviation Investigation Final Report

Location:	CHICAGO, Illinois	Incident Number:	OPS111A552
Date & Time:	May 16, 2011, 09:34 Local	Registration:	N15574
Aircraft:	Embraer EMB-145LR	Aircraft Damage:	None
Defining Event:	Air traffic event	Injuries:	52 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

A near-midair collision occurred between a Bombardier CRJ2 landing on runway 9R and an Embraer ERJ-145 regional jet departing from runway 32L. The CRJ2 passed 480 feet behind and 275 feet above the ERJ-145. According to the tower air traffic controller responsible for operations on runway 32L, he scanned the final approach course for runway 9R to look for conflicting traffic and saw the approaching CRJ2. However, he then forgot about the arrival and cleared the ERJ-145 for takeoff. The controller was unable to provide any explanation for the lapse. The airport was not equipped with automated assistance for detecting conflicts between departures and arrivals on crossing runways such as these.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The air traffic controller's failure to adhere to runway separation requirements and his issuance of an improper takeoff clearance. Contributing to the incident was the controller's failure to recall that there was an arrival inbound to a crossing runway.

Findings

Personnel issues	Incorrect action selection - ATC personnel
Personnel issues	Forgotten action/omission - ATC personnel

Factual Information

History of Flight

Takeoff

Air traffic event (Defining event)

SUMMARY

On May 16, 2011, at 0934 central daylight time, a near mid air collision (NMAC) occurred at Chicago O'Hare International Airport (ORD) when SkyWest Airlines flight 6958 (SKW6958), a Bombardier CRJ2 en route from Muskegon County, Michigan to ORD passed in close proximity to ExpressJet Airlines flight 6075 (BTA6075), an Embraer 145 departing from ORD to Buffalo, New York. According to recorded FAA radar data, SKW6958 crossed runway 32L about 275 feet above and 480 feet behind BTA6075. Both aircraft were under control of ORD air traffic control tower (ATCT) at the time of the incident. There was no damage reported to either aircraft, or any injuries to passengers or crew.

HISTORY OF FLIGHT

SKW6958 was a scheduled 14 Code of Federal Regulations Part 121 (14 CFR part 121) passenger flight operating from Muskegon County, Michigan, to Chicago, Illinois. The flight was on a visual approach to runway 9R at Chicago O'Hare International Airport. The pilot contacted the ORD North Local Controller (NLC) at 0934:36, reporting in at LANCE. The controller transmitted to the pilot, "SKW6958 O'Hare Tower, runway 9 right clear to land, wind 020 at 14 traffic departing prior to your arrival," and the pilot acknowledged.

BTA6075 was a scheduled 14 CFR part 121 passenger flight operating from Chicago O'Hare International Airport to Buffalo, New York. The pilot was instructed to taxi to runway 32L for departure.

At 09:34:53, the Third Local Controller (3LC) cleared BTA6075 to line up and wait on runway 32L. At 0935:37, BTA6075 was cleared for takeoff, "...don't delay roll."

At 09:36:33, the 3LC controller transmitted, "aw [expletive]." At 0936:34 the NLC issued a go around to SKW6958. The NLC controller then continued, "SKW6958 climb and maintain four thousand, helicopter traffic just off the departure end low level."

At 09:36:45 the pilot of BTA6075 transmitted "What the [expletive] was that?" followed by "where do you want 6075 to go now?" The 3LC instructed BTA6075 to turn right heading 020 and to remain this frequency. BTA6075 responded with "what was that?" and the controller responded "sorry about that."

The remainder of the ATC handling was routine. The tower supervisor relieved the 3LC

controller from position at 0937:00 and logged the incident in the Daily Record of Facility Operations.

RADAR DATA

Radar data for this report was obtained from the ORD Airport Surface Detection Equipment-X system. Graphics of the two flights as they approached the intersection and after passing the intersection of runway 32L/9R are contained in the ATC Group factual report and have been added to the docket.

For further information, see the Air Traffic Control Group Chairman's Factual 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:	Embraer	Registration:	N15574
Model/Series:	EMB-145LR	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	145639
Landing Gear Type:	Retractable - Tricycle	Seats:	55
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:		Engine Manufacturer:	
ELT:	Installed, not activated	Engine Model/Series:	
Registered Owner:	WELLS FARGO BANK NORTHWEST NA TRUSTEE	Rated Power:	
Operator:		Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	ExpressJet	Operator Designator Code:	C2XA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KORD	Distance from Accident Site:	
Observation Time:	08:51 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 25000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 21 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	9°C / 1°C
Precipitation and Obscuration:			
Departure Point:	CHICAGO, IL (KORD)	Type of Flight Plan Filed:	IFR
Destination:	Buffalo, NY (KBUF)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Air traffic control;Class B

Airport Information

Airport:	Chicago O'Hare International KORD	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	672 ft msl	Runway Surface Condition:	
Runway Used:	32L	IFR Approach:	None
Runway Length/Width:	9685 ft / 200 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	None
Passenger Injuries:	49 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	52 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Koschig, Betty
Additional Participating Persons:	Charles A Olvis; National Transportation Safety Board; Washington, DC Karen Seals; Federal Aviation Administration; Washington, DC Pat Keane; National Air Traffic Controllers Association; San Diego, CA Michelle Wrobleski; National Air Traffic Controllers Association; Green Bay, WI
Original Publish Date:	November 7, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=79125

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 Final Report

Location:	CHICAGO, Illinois	Incident Number:	OPS111A552
Date & Time:	May 16, 2011, 09:34 Local	Registration:	N905SW
Aircraft:	BOMBARDIER INC CL-600-2B19	Aircraft Damage:	None
Defining Event:	Air traffic event	Injuries:	11 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

A near-midair collision occurred between a Bombardier CRJ2 landing on runway 9R and an Embraer ERJ-145 regional jet departing from runway 32L. The CRJ2 passed 480 feet behind and 275 feet above the ERJ-145. According to the tower air traffic controller responsible for operations on runway 32L, he scanned the final approach course for runway 9R to look for conflicting traffic and saw the approaching CRJ2. However, he then forgot about the arrival and cleared the ERJ-145 for takeoff. The controller was unable to provide any explanation for the lapse. The airport was not equipped with automated assistance for detecting conflicts between departures and arrivals on crossing runways such as these.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The air traffic controller's failure to adhere to runway separation requirements and his issuance of an improper takeoff clearance. Contributing to the incident was the controller's failure to recall that there was an arrival inbound to a crossing runway.

Findings

Personnel issues	Incorrect action selection - ATC personnel
Personnel issues	Forgotten action/omission - ATC personnel

Factual Information

History of Flight

Approach

Air traffic event

SUMMARY

On May 16, 2011, at 0934 central daylight time, a near mid air collision (NMAC) occurred at Chicago O'Hare International Airport (ORD) when SkyWest Airlines flight 6958 (SKW6958), a Bombardier CRJ2 en route from Muskegon County, Michigan to ORD passed in close proximity to ExpressJet Airlines flight 6075 (BTA6075), an Embraer 145 departing from ORD to Buffalo, New York. According to recorded FAA radar data, SKW6958 crossed runway 32L about 275 feet above and 480 feet behind BTA6075. Both aircraft were under control of ORD air traffic control tower (ATCT) at the time of the incident. There was no damage reported to either aircraft, or any injuries to passengers or crew.

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controller from position at 0937:00 and logged the incident in the Daily Record of Facility Operations.

RADAR DATA

Radar data for this report was obtained from the ORD Airport Surface Detection Equipment-X system. Graphics of the two flights as they approached the intersection and after passing the intersection of runway 32L/9R are contained in the ATC Group factual report and have been added to the docket.

For further information, see the Air Traffic Control Group Chairman's Factual 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:	BOMBARDIER INC	Registration:	N905SW
Model/Series:	CL-600-2B19	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	7437
Landing Gear Type:	Tricycle	Seats:	55
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:		Engine Manufacturer:	GE
ELT:	Installed, not activated	Engine Model/Series:	CF34 SERIES
Registered Owner:	WELLS FARGO BANK NORTHWEST NA TRUSTEE	Rated Power:	9140 Lbs thrust
Operator:		Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	ExpressJet	Operator Designator Code:	C2XA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KORD	Distance from Accident Site:	
Observation Time:	08:51 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 25000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 21 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	9°C / 1°C
Precipitation and Obscuration:			
Departure Point:	Muskegon County, MI (KMG)	Type of Flight Plan Filed:	IFR
Destination:	CHICAGO, IL (KORD)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Air traffic control;Class B

Airport Information

Airport:	Chicago O'Hare International KORD	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	672 ft msl	Runway Surface Condition:	
Runway Used:	32L	IFR Approach:	None
Runway Length/Width:	9685 ft / 200 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	None
Passenger Injuries:	8 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	11 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Koschig, Betty
Additional Participating Persons:	Charles A Olvis; National Transportation Safety Board; Washington, DC Karen Seals; Federal Aviation Administration; Washington, DC Pat Keane; National Air Traffic Controllers Association; San Diego, CA Michelle Wroblewski; National Air Traffic Controllers Association; Green Bay, WI
Original Publish Date:	November 7, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=79125

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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](#).