National Transportation Safety Board
Aviation Incident Final Report

Location:	Gulfport, MS	**Incident Number:**	OPS11IA673A
Date & Time:	06/19/2011, 1243 CDT	**Registration:**	
Aircraft:	EMBRAER EMB-145EP	**Aircraft Damage:**	None
Defining Event:	Air traffic event	**Injuries:**	53 None
Flight Conducted Under:			

Analysis

N54120, a Cessna 172, called ready for takeoff on runway 18. The tower local controller (LC) cleared the Cessna for takeoff on runway 18. Sixteen seconds later, (Jet Link) BTA2555/Embraer ERJ145 called ready for takeoff for runway 14. The LC cleared the ERJ145 for takeoff. The departure flight path of runway 18 intersects runway 14. The local controller was working the LC position combined with Ground Control (GC), Clearance Delivery (CD)/Flight Data (FD) and Controller-In-Charge (CIC) positions. The Cessna was airborne crossing taxiway Charlie when the ERJ145 passed through the intersecting flight paths airborne in front of the Cessna. Both aircraft were estimated to be at 300 feet. No traffic was issued to either aircraft by the LC. Closest proximity was estimated to be 0 feet vertically and 300 feet laterally. According to FAA Order 7110.65, Air Traffic Control, paragraph 3-9-8, Intersecting Runway Separation:

a. Issue traffic information to each aircraft operating on intersecting runways.

b. Separate departing aircraft from an aircraft using an intersecting runway, or runways when the flight paths intersect, by ensuring that the departure does not begin takeoff roll until one of the following exists:

1. The preceding aircraft has departed and passed the intersection, has crossed the departure runway, or is turning to avert any conflict.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: the Gulfport control tower local controller cleared two aircraft for takeoff from runways with intersecting departure flight paths without ensuring the first aircraft had passed the flight path intersection prior to clearing the second aircraft for takeoff.

Findings

Personnel issues	Incorrect action selection - ATC personnel (Cause)

Factual Information

At Gulfport-Biloxi International Airport (GPT) on Sunday, June 19, 2011 at 12:43 pm, N54120, a Cessna 172, was cleared for takeoff at the intersection of runway 18 and taxiway A by the tower local controller (LC). Sixteen seconds later, (Jet Link) BTA2555, an ERJ145 called ready for takeoff for runway 14. The LC cleared the ERJ145 for takeoff. The departure flight path of runway 18 intersected with the departure flight path of runway 14.

The Gulfport air traffic control (ATC) facility was a combined terminal radar approach control (TRACON) and air traffic control tower (ATCT). The TRACON was located in the ATC facility below the control tower cab. The approach control function was transferred to the tower when conditions warranted.

Facility staffing included a support specialist, two front line managers (FLM), 13 certified professional controllers (CPC), and 10 developmental controllers with two additional developmental controllers due to arrive within several weeks of this incident.

Due to the large number of developmental controllers at GPT, facility policy directed that all developmental controllers receive a minimum of two hours of on-the-job (OJT) training each day. Additionally, facility policy mandated that the TRACON be opened daily from 10:00 to 17:00 and to make an entry in the facility log, FAA form 7230-4, if the TRACON was not opened to explain the reason for non-compliance with the facility directive.

On the day of the incident the facility policy was not complied with by the controller-in-charge (CIC)/LC in that the TRACON was not opened. According to the CIC/LC, opening the TRACON would have required staffing not readily available resulting in the inability to comply with the mandatory two hour training per developmental facility policy. There were not enough qualified controllers to comply with both facility directives. This fact was not logged in the facility log and no explanation to the reason it was not logged was provided.

At the time of the incident, the tower was staffed by two people; an approach controller performing radar functions in the tower and a local controller (LC). The LC involved in the incident was working ground control, flight data/clearance delivery, and controller-in-charge (CIC) positions concurrently. An on the job training instructor (OJTI) CPC and a developmental controller had just arrived in the tower to take over the LC position for LC OJT and were standing in the back of the tower cab.

The Gulfport-Biloxi International Airport (GPT) had two runways; runway 18/36 4935 feet long by 150 feet wide, and runway 14/32 9002 feet long by 150 feet wide. The runways did not intersect but the departure flight paths of runway 18 and 14 did.

History of Flight

The Cessna called GPT ground control at 12:35 for a VFR clearance to the local operating area at 2500 feet. The ground controller issued a discreet mode 3/A code of 0240, a departure control frequency of 127.5 and instructions to remain at or below 2000 feet. The Cessna acknowledged the clearance and called for taxi at 12:37. The ground controller directed the Cessna to taxi to runway 18 via taxiway A. The Cessna acknowledged. The Cessna taxied from the general aviation ramp via taxiway A to the intersection of runway 18/36 and taxiway A. The Cessna was not required to cross any runways en route to the approach end of runway 18.

At 1239, Jetlink (BTA) 2555, an ERJ145 advised ground control that they were pushing off of

terminal gate 3 and called for taxi at 1241. Ground control directed the ERJ145 to taxi to runway 14 via taxiway C. The ERJ145 taxied from the passenger terminal located to the west of runway 18/36 and east of runway 14/32 and was not required to cross any runways en route to the approach end of runway 14.

At 12:42:58 the Cessna called the tower and reported that they were holding short of runway 18 ready for takeoff. At 12:43:11 the LC directed the Cessna to fly runway heading and issued a takeoff clearance. The Cessna acknowledged.

At 12:43:21 the ERJ145 called the tower ready for takeoff. At 12:43:27 the LC directed the ERJ145 to fly runway heading and issued a takeoff clearance.

Traffic information regarding the converging flight path departure courses was not issued to either aircraft.

At this time the OJTI CPC and developmental controller we just arriving in the tower cab and heard the simultaneous takeoff clearances issued by the LC. The OJTI CPC stated to the LC that "you've got two rolling". The LC did not acknowledge. The developmental controller recalled seeing the ERJ145 pass in front of the Cessna.

Radar data indicates that the ERJ145 passed in front of the Cessna at the same altitude separated by approximately 300 feet laterally.

According to FAA Order 7110.65, Air Traffic Control, paragraph 3-9-8, Intersecting Runway Separation:

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After the ERJ145 passed the Cessna, and after the LC had directed the ERJ145 to turn right direct Harvey [VORTAC], climb and maintain 10,000. The ERJ145 pilot acknowledged and 8 seconds later asked the tower if the Cessna traffic was a go-around. This was followed immediately by a very brief unintelligible transmission on the frequency. Ten seconds later, the ERJ145 pilot again queried the incident LC if the Cessna was a go-around. The incident LC replied with "yes sir".

The event was not logged in the facility log, FAA Form 7230-4.

The OJTI CPC and developmental controller reported the incident to facility management on Monday, June 20, 2011.

Air Traffic Control

The investigation revealed a number of deficiencies within the ATC facility that contributed to this incident. During the interview of the incident LC, he revealed that from previous experience, he anticipated that the Cessna departing runway 18 would take 3 to 5 minutes to get airborne and the ERJ145 would depart well in advance of the Cessna. The incident LC

stated that he was assisting the approach controller with a flight progress issue at the flight data input/output (FDIO) terminal and did not observe the two aircraft depart. The incident LC stated that when the ERJ145 queried him about the Cessna he did not understand how the two aircraft could have conflicted with each other, and assumed the Cessna was a no radio arrival at the airport on a go-around. While the Cessna that conflicted with the ERJ145 was the Cessna that the incident LC had cleared for takeoff, the incident LC did not comprehend that the Cessna could have departed so rapidly after being issued a takeoff clearance. The incident LC stated that he was still confused about the event after being relieved from the LC position. He was not aware of an investigation into the event until he returned to work on Wednesday, June 22, 2011. The incident LC stated that he was not aware that an operational error had occurred until Thursday, June 23rd when he was advised by facility management that the FAA was conducting an official investigation. The incident LC filed an air traffic safety action program (ATSAP) report that was rejected by the ATSAP event review committee (ERC).

The incident LC considered himself an average controller that got along well with his peers and was not aware of any animosities between he and his co-workers. The incident LC acknowledged that he had been formally disciplined on two occasions for being late for work but had no other problems at the facility. The incident LC professed that he was not happy at GPT.

The FLM, for whom the incident LC worked, professed frustration at the continual problems created by the incident LC and the inability to effectively correct his deficiencies. The FLM also stated that the incident LC was no longer utilized as an OJTI due to poor teaching techniques. The FLM stated that as a result of this incident, the incident LC was no longer allowed to work the local control position.

The investigation revealed that while the ATM and FLM's were aware of and had coordinated the restriction to performing OJTI and LC, the incident LC had not been advised of those restrictions. Additionally, the incident LC was still certified as a CIC. This allowed the incident LC to work any position, and after assigning CIC duties to another controller, perform OJTI duties after hours, on weekends, before management arrived at the facility each weekday morning, or at any time the incident LC was not actively supervised. The situation whereby the incident LC could have assigned himself to the LC position or provided on-the-job training instruction did not present itself between the incident and the NTSB investigation; however, facility management did not advise the incident LC that professional performance restrictions had been put in place.

At the conclusion of the investigation, the ATC group provided an out-brief to the ATM of the investigation findings.

History of Flight

Takeoff	Air traffic event (Defining event)

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	EMBRAER	**Registration:**	
Model/Series:	EMB-145EP	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:		**Serial Number:**	145009
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:**	ROLLS-ROYC
ELT:		**Engine Model/Series:**	AE3007 SER
Registered Owner:		**Rated Power:**	7200 hp
Operator:		**Operating Certificate(s) Held:**	Commuter Air Carrier (135)
Operator Does Business As:		**Operator Designator Code:**	C2XA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	GPT, 28 ft msl	**Observation Time:**	1153 CDT
Distance from Accident Site:	0 Nautical Miles	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 2600 ft agl	**Temperature/Dew Point:**	33°C / 22°C
Lowest Ceiling:	None	**Visibility**	10 Miles
Wind Speed/Gusts, Direction:	10 knots, 210°	**Visibility (RVR):**	
Altimeter Setting:	29.98 inches Hg	**Visibility (RVV):**	
Precipitation and Obscuration:			
Departure Point:	Gulfport, MS (GPT)	**Type of Flight Plan Filed:**	IFR
Destination:	Houston, TX (IAH)	**Type of Clearance:**	IFR
Departure Time:	1243 CDT	**Type of Airspace:**	TRSA

Airport Information

Airport:	Gulfport-Biloxi Interntational (GPT)	**Runway Surface Type:**	N/A
Airport Elevation:	28 ft	**Runway Surface Condition:**	Dry
Runway Used:	14	**IFR Approach:**	None
Runway Length/Width:	9002 ft / 150 ft	**VFR Approach/Landing:**	None

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:**	30.397222, -89.061111

Administrative Information

Investigator In Charge (IIC):	Daniel J Bartlett	**Adopted Date:**	01/18/2012
Additional Participating Persons:	Charles Olvis; NTSB; Washington, DC Chad Sneve; FAA - NATCA; Atlanta, GA Chris Hatem; FAA; Washington, DC		
Publish Date:	01/18/2012		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=80858		