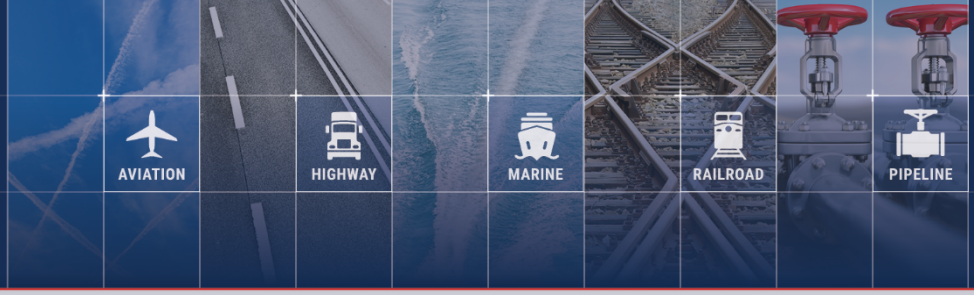

Aviation Investigation Factual Report

Location:	Spring Hill, Florida	**Accident Number:**	ERA15FA361
Date & Time:	September 18, 2015, 08:55 Local	**Registration:**	N8615Z
Aircraft:	Cessna U206	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

On September 18, 2015, about 0855 eastern daylight time, a Cessna U206E amphibious airplane, N8615Z, collided with terrain near Spring Hill, Florida. The commercial pilot was fatally injured and the airplane was substantially damaged. The airplane was registered to Keystone Seaplane, LLC, Odessa, Florida, and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Instrument meteorological conditions prevailed at the time of the accident, and an instrument flight rules (IFR) flight plan was filed for the flight, which departed Page Airport (FMY), Fort Myers, Florida, about 0727.

A review of air traffic control communications provided by the Federal Aviation Administration (FAA) revealed the pilot's original flight plan was from FMY to the Lake Keystone Seaplane Base (57FL), Odessa, Florida, where the airplane was based. When the pilot arrived near 57FL, he told air traffic control that he had the seaplane base in sight and cancelled his IFR flight plan at 0833. A review of radar data revealed that the airplane then made a series of turns in the vicinity of the seaplane base before the pilot requested an IFR clearance to the Brooksville-Tampa Bay Regional Airport (BKV), Brooksville, Florida. The pilot was cleared by air traffic control for the ILS RWY 9 instrument approach into BKV. Radar data revealed that the airplane was established on the approach until reaching the final approach fix, when it descended below the glideslope and radar contact was lost about 1 mile from the airport. There were no distress calls from the pilot. The last recorded radar return indicated the airplane was at an altitude of 625 ft mean sea level (msl) and a ground speed of 68 knots.

A handheld Garmin GPS 796 unit was located in the wreckage. Data downloaded from the unit revealed the airplane departed FMY about 0726:40, proceeded to Keystone Lake, circled the area for several minutes before proceeding to and executing the instrument approach into BKV. The last GPS data point was recorded at 0851:22, about 4 minutes before the accident. At that time, the airplane was on a heading of 081° at 2,121 ft msl and a ground speed of 95 knots.

Several witnesses observed the airplane right before it impacted the ground. One witness stated that he first heard the airplane's engine "cut out." When he looked up, he saw the airplane come out of the clouds and it "started to spiral down" over his house. The airplane then veered to the north before the sound of an impact was heard. A second witness said he heard the airplane approaching and the engine "got extremely loud, almost at full throttle" just before it came into his view. The witness said the airplane was at an "extremely angled," nose-down pitch attitude and was descending at a high speed. He did not see the impact due to trees.

Pilot Information

Certificate:	Commercial	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	August 11, 2014
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	August 26, 2015
Flight Time:	559 hours (Total, all aircraft), 320.7 hours (Total, this make and model), 442.1 hours (Pilot In Command, all aircraft), 53.5 hours (Last 90 days, all aircraft), 39.2 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

The pilot held a commercial pilot certificate with ratings for airplane single-engine land, single-engine sea, and instrument airplane. His most recent FAA second-class medical certificate was issued on August 11, 2014. A review of the pilot's logbook revealed that as of September 17, 2015, he had accrued a total of 559 flight hours, of which 320.7 hours were in the accident airplane make and model. He also had 55.5 hours of simulated instrument time, and 15.8 hours of actual instrument experience. In the 6 months preceding the accident, the pilot logged 3.0 hours of actual instrument time, of which 1.8 hours were logged two days before the accident while receiving instruction for his instrument flight instructor rating. The instruction included holding procedures and six instrument approaches. He also logged 5.8 hours of simulated instrument time in the 6 months preceding the accident, which included navigation and standard terminal arrival routes.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N8615Z
Model/Series:	U206 E	**Aircraft Category:**	Airplane
Year of Manufacture:	1971	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	U20601658
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	August 12, 2015 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2898 Hrs as of last inspection	**Engine Manufacturer:**	Continental Motors Inc
ELT:	C91 installed, not activated	**Engine Model/Series:**	IO-550F(20)
Registered Owner:	On file	**Rated Power:**	300 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

The accident airplane was a float-equipped Cessna U206E. It was a six-seat, high-wing airplane that was powered by a Continental Motors IO-550F, 300 hp, six-cylinder engine equipped with a three-bladed McCauley propeller. The airplane's last annual inspection was completed on August 12, 2015, at an airframe total time of 2,898 hours. The engine had a total of 301 hours since factory overhaul.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BKV,76 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	08:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	30°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.84 inches Hg	**Temperature/Dew Point:**	24°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Myers, FL (FMY)	**Type of Flight Plan Filed:**	IFR
Destination:	Brooksville, FL (BKV)	**Type of Clearance:**	IFR
Departure Time:	07:26 Local	**Type of Airspace:**	Class D

The weather conditions reported at BKV at 0853, included wind from 030° at 6 knots,

visibility 10 statute miles, overcast ceiling 500 ft (variable between 400 and 800 ft), temperature 24° C, dew point 22° C, and an altimeter setting of 29.84 inches of Hg.

Airport Information

Airport:	BROOKSVILLE-TAMPA BAY RGNL BKV	**Runway Surface Type:**	
Airport Elevation:	75 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	ILS
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	28.473888,-82.510002(est)

The airplane came to rest in the backyard of a private residence. All major components of the airplane were accounted for at the site, and there was no postimpact fire. The point of initial impact was a stand of trees that were about 80 ft tall. The airplane then collided with a fence and the ground before coming to rest about 75 ft from the initial impact point. Severed tree limbs, the left elevator, the left elevator tip fairing, a tire, and a propeller blade were scattered along the wreckage path. The main wreckage included the propeller, engine, fuselage, tail section, and both pontoons. Several of the severed tree limbs exhibited flat, 45° cut surfaces with black paint transfer.

Examination of the main wreckage revealed it was twisted, crushed, and partially lying on its right side. Flight control continuity was established for all major flight control surfaces. The flaps were fully retracted and the wheels were extended. The elevator trim tab was in the 10° down position.

The left wing remained attached to the fuselage and sustained impact damage. The fuel tank was breached, and first responders reported fuel draining from the wing upon their arrival at the scene. The right wing also sustained impact damage and had separated from the fuselage at the wing root. First responders reported fuel draining from the right wing's tank; in addition, about 5 gallons of 100LL fuel were drained during the recovery process. The two header tanks appeared to be undamaged. The fuel selector valve was selected to the right tank. The firewall fuel strainer remained attached to the firewall and the bowl was full of fuel. Some fuel was also found in the engine-driven fuel pump and fuel manifold valve. No evidence of water or contamination was observed. According to a fuel provider at

FMY, the airplane was topped off with 36.5 gallons of 100LL fuel the day before the accident.

The engine remained partially attached to the airframe by control cables, and the three-bladed propeller had separated from the engine at its hub. The spinner exhibited rotational damage. One blade had separated from the propeller hub and was found in the initial impact crater. The blade was bent forward. The other two blades remained in the hub, which was located about 4-ft from the fuselage. The second and third blades were twisted.

The engine crankcase sustained impact damage to the lower forward area and was leaking oil. The top spark plugs were removed and exhibited normal wear as per the Champion Check-A-Plug chart. The rocker covers were removed and the engine was manually rotated. Compression and valve train continuity was established on all but the No. 6 cylinder. Further examination revealed the push rod and push rod tube for the No. 6 cylinder was impact-damaged.

The left magneto remained attached to the engine; however, the right had separated from its mounting pad and remained attached via the ignition leads. When the engine was rotated, spark was produced to each of the left magneto's ignition leads. An electric drill was used to spin the right magneto, and spark was produced to each ignition lead.

The fuel manifold valve was removed from the engine and disassembled. A small amount of fuel was in the valve and the diaphragm was intact. The fuel screen was absent of debris. Although the No. 1 injector sustained some impact damage, each of the injectors were removed from the engine and found absent of debris. The fuel pump was removed from the engine and fuel was present in the pump. The pump rotated freely when turned and the drive coupling was intact. The throttle body and metering unit were absent of debris and the throttle body moved freely when the throttle arm was moved manually.

The vacuum pump was removed and disassembled. The pump rotated smoothly and the carbon vanes were intact. The interior of the drum was absent of any rotational scoring.

The oil pump remained attached to the engine. The oil pressure relief valve was removed and inspected. The plunger and spring were intact. The valve seat was inspected, and no damage was noted. The oil filter was removed and the filament was removed. It was absent of debris. The oil sump and cooler sustained impact damage.

The propeller governor remained attached to the engine, but sustained impact damage. The control arm was in the full forward position.

Physical examination of the engine revealed there were no discrepancies that would have precluded normal operation prior to impact.

The airplane was equipped with a J.P. Instruments (JPI) EDM-930 engine monitor. The data downloaded from the unit included the accident flight and began at 0713:02 and ended at 0855:13. Eleven engine parameters were recorded every six seconds. These parameters included exhaust gas temperature, cylinder heat temperature, oil pressure and temperature, manifold pressure, outside air temperature, turbocharger inlet temperature, engine rpm, fuel remaining and fuel used, fuel flow, and battery voltage/current. The data was plotted on a graph and reviewed. The recorded engine data did not

reveal any anomalies that would indicate abnormal operation of the engine before impact.

Medical and Pathological Information

An autopsy was conducted on the pilot by the Florida Medical Examiner's Office - District 5, Leesburg, Florida. The cause of death was multiple blunt force injuries.

Toxicology findings from the FAA's Bioaeronautical Research Sciences Laboratory were positive for the following metabolites of cocaine:

Anhydroecgonine Methyl Ester detected in the liver and cavity blood.

Benzoylecgonine and ecgonine methyl ester detected in cavity blood.

The 56-year-old pilot had a history of illegal drug use and suicidal thoughts. At the time of the accident, he was under investigation by the FAA for not reporting this past history on his application for a medical certificate.

As a result of these findings, the NTSB's Chief Medical Officer conducted a postaccident review of the pilot's FAA Medical File and Medical Case Review. According to the NTSB Medical Factual Report, the pilot initially applied for and received an FAA medical certificate and student pilot certificate in 2006. Records in the FAA file indicated that the pilot was pulled over for reckless driving on September 15, 2007, and, after a search of his vehicle, he was arrested and later convicted for possession of 6 grams of marijuana and related paraphernalia. He completed 6 weeks of drug treatment and probation as a result of this conviction, and when the FAA became aware of this event, they reviewed pertinent records pertaining to the conviction. In 2009, the FAA determined that the pilot was eligible for a third-class medical certificate.

On August 11, 2014, the FAA issued the pilot a second-class medical certificate with a limitation for corrective lenses. At that time, he reported the use of testosterone and vitamin B12 on the medical application.

On September 15, 2014, a call was made to the FAA's Hotline regarding the pilot's mental status and behavior, including the fact that the pilot had recently sued his homeowner's association and neighbors over complaints they had made about his flying.

On September 25, 2014, the FAA began its investigation into the allegations and required the pilot to provide information regarding an incident in June 2007, where the pilot had been committed to a psychiatric ward at the request of the police. According to a copy of the police report obtained separately from the FAA medical file, this was the result of an episode where he had been using cocaine, had made comments to friends and family about suicide, and had been shooting guns inside his residence. According to friends and family, he was threatening to commit suicide using the firearm in his hand at the time.

As part of the ongoing FAA investigation to determine the pilot's eligibility for a medical certificate, complete psychiatric and psychological evaluations were requested in February 2015. The reports from these evaluations are contained in his FAA file; in each, the pilot denied the use of any illicit substance and reported only the occasional use of alcohol. No psychiatric or psychological diagnosis was made by either practitioner who examined the pilot. These reports were provided to the FAA in a letter dated April 16, 2015.

On August 10, 2015, the FAA referred all of the medical files on the pilot to the FAA's psychology consultant, requesting an evaluation and determination of the pilot's eligibility for a medical certificate. No final determination had been made at the time of the accident.

Administrative Information

Investigator In Charge (IIC):	Read, Leah
Additional Participating Persons:	Randy Ryhal; FAA/FSDO; Tampa, FL Jan Smith; Textron Aviation; Wichita, KS Mike Council; Continental Motors Inc; Mobile, AL
Report Date:	March 21, 2017
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=91994