NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

October 31, 2013

Attachment 1 – Interview Summaries

OPERATIONAL FACTORS

ERA13MA139

Table Of Contents

A. INTERVIEW SUMMARIES

1.0 Interview: Keith Bounds – President Spirit Aviation

Date: February 21, 2013
Location: KHQU Airport terminal
Time: 1100 EST
Present were: David Lawrence – NTSB, Scott Marshall – FAA

Mr. Bounds declined a request to have a representative accompany him.

During the interview, Mr. Bounds stated the following.

- Also present was Jeff S. Green with Precision Approach, LLC.
- Mr. Bounds was the owner of the FBO at KHQO and president of Spirit Aviation for 7 years.
- The airport hired Precision Approach to mx on the runway lights (Keith to provide Mark George an invoice of the 2/21/2013 lighting check to verify PAPI for 10, taxiway lights and runway lights were functional).
- Runway 10 PAPI was cleared via FAA flight check sometime in November or December, but the FAA never advised them so they could clear the NOTAM.
- Runway lights are PCL (Pilot controlled lighting).
- They are controlled by 3/5/7 clicks on CTAF frequency. 3 clicks is for low runway lights (2.8 amps), 5 clicks for medium (4.1 amps), and 7 clicks for high (6.6 amps).
- Taxi way lights come on with runway lights, and are 4.8 amps.
- PAPI is only operational when runway lights are on medium or low.
- The runway lights are tested once every month. Currently there is one runway light that is not operational.
- The accident captain once told the airport manager that he thought the taxiway lights were too dim.
- N777VG operated regularly Monday, Tuesday and Wednesday. On Monday, they would leave at about 4am, sometimes spend the night, and then return Tuesday afternoon around 5pm. They would then leave on Wednesday morning early, then return in the evening around 4 or 5pm. It was not unusual for them to arrive in Thompson around 8pm.
- The airplane flew to MCO the previous weekend.
- Pilot typically fueled out of KHQU for a roundtrip.
- The aircraft did not have maintenance done on it in Thompson, only refueling and adding oil. The pilot was the primary operator of the airplane, and was very particular about it, asking that a cover be placed on the wing when refueling to avoid scratches.
- He never flew alone, and always had another pilot with him.
- The flights were always full of passengers.
- They occasionally saw deer crossing the runway in several spots. On the night of the accident, they saw a deer cross the runway around where the glideslope antenna was, around 10pm.

- The airport is owned by the county, and there is no wildlife mitigation fencing around the perimeter. The airport has requested that a fence be built around the property, but the county has said no due to budgetary constraints.
- The security camera facing the glideslope antenna was motion sensitive, and captured the airplane passing over the runway at 20:06:02 (the clock is based upon the computer time, not GPS).
- Unicom voice transmissions are not recorded.

Interview concluded at 1140.

2.0 Interview: Jimmy Williams – Fire Fighter and EMT
Date: February 21, 2013
Location: KHQU Airport terminal
Time: 1430 EST
Present were: David Lawrence – NTSB, Scott Marshall – FAA

Mr. Williams declined a request to have a representative accompany him.

During the interview, Mr. Williams stated the following:

He was 33 years old, and had been an EMT for about 7 years for the McDuffie County Fire and Rescue. He said he was at the McDonalds when he saw a "blue electrical" flash of light, followed by the sound of a bright orange explosion. He saw a police car and fire in the woods. He drove to the accident site, and upon arriving at the woods, saw a man 65-70 feet ahead of him walking out of the woods, covered with blood saying "help me". He saw an injury to the man's left arm.

He stopped to check on him. He drove him back up to the road, and the man asked if he could call his wife. He asked the injured man 3 questions to determine his level of alertness. The first question was "who was the president", and he correctly answered. The second question was "what year was it" and he did not know that answer. The third question was "what happened" and he said "I overshot, I overshot, I overshot."

He said the man was dressed in a blue nautical jacket, and was a tall, husky and older gentleman. He said the man called his wife and told her "I'm ok" then hung up. He checked the man's vital signs, and then helped put him on a spine board before loading him in the transport to the trauma center. The number the FO called was [redacted]. He got another text message at 2035 that said "have Jeremy call again." He said the victim was not groggy, and his words were clear, though he smelled of jet fuel. He said the victim had a bleeding head wound above his hair line, with cheek abrasions.

Interview concluded at 1450.

3.0 Interview: Kevin A. Perry, Captain: Station #2 ARFF
Date: February 21, 2013

Location: KHQU Airport terminal
Time: 1500 EST
Present were: David Lawrence – NTSB, Scott Marshall – FAA

Mr. Perrry declined a request to have a representative accompany him.

During the interview, Mr. Perry stated the following:

He had been with this fire house for 15 years. He did not know the crew of the accident airplane, but he was familiar with the airplane. He never saw the airplane have a problem on landing.

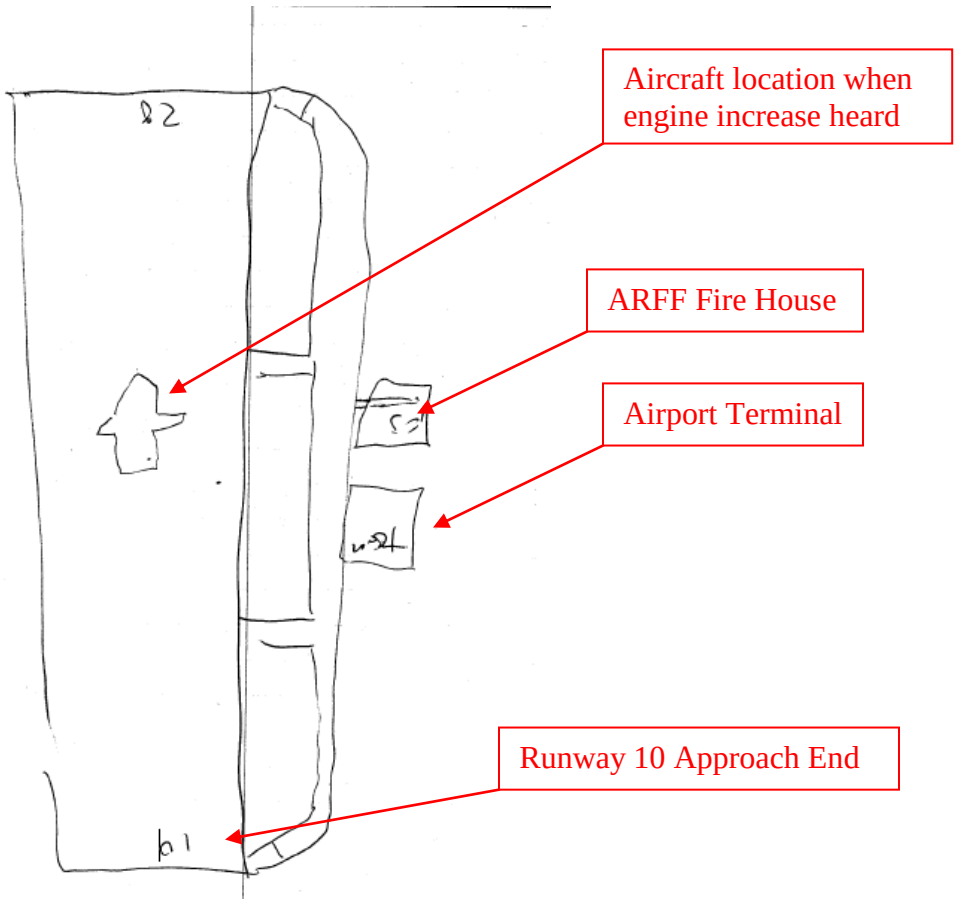
He was at the station when he heard the airplane come in for landing. He said the engines were at half throttle about midfield, and never heard the tires "squawk" on landing. He then heard the throttles go up. He did not see the initial fireball, but did see the orange fireball. He never saw the airplane, and did not remember seeing the runway lights.

After the fireball, he got suited up in the engine, contacted dispatch and headed toward the accident at 2012, driving along the runway. He did not see the runway lights or the red lights at the end of the runway.

He said the emergency generator at the terminal would put the fire house at 60% power and the terminal at 40% power. He was not sure if the runway lights were on the emergency generator. He said the runway lights would come on at dusk for about 30 minutes.

He said the time from the noise he heard to observing the runway lights weren't on was about 3-4 minutes.

- **Drawing from Mr. Perry**



Interview concluded at 1520.

4.0 Interviewee: Kelly Vann, Office Manager/CEO, Vein Guys
Date: February 22, 2013
Location: Vein Guys, 4350 Towne Centre Dr. Suite 2000, Evans, GA 30809
Time: Approximately 1500 EST
Present were: David Lawrence, Maryam Allahyar, Eric Emery - NTSB; Scott Marshall – FAA

Ms. Vann declined a request to have a representative accompany her.

During the interview, Ms. Vann stated the following:

Dr. S. Roth expanded the Vein Guys Practice to Nashville, Atlanta, and Raleigh, and was working on expanding the practice to Memphis as well. Dr. Roth's travel schedule was as follows: on Mondays, he traveled on the jet to Atlanta about 4:00 or 5:00 a.m. and returned around 1:00 p.m. to see his patients scheduled for 2:00 p.m. in Augusta. On Tuesdays, he stayed at the Augusta office. On Wednesdays, he traveled to Nashville at about 4:00 a.m. and returned around 8:00 p.m. On Thursdays, he traveled to Raleigh around 0430 or 5:00 a.m. and returned around 7:00 p.m. He stayed at the Augusta office on Fridays.

She indicated that all of Dr. Roth's air travels were on the same plane and with the same operator, unless maintenance had to be performed on the plane, at which point they would use Akin Air.

Dr. Roth was the only physician on these trips; however, his staff at times traveled to Nashville with him. He was always accompanied by his staff on his trips to Raleigh. Dr. Roth had known the accident captain since 2008, when he flew the King Air for them. Ms. Vann said that she had not seen any written contract between the captain and Dr. Roth and all payments were made to Executive Shuttle, the captain's other business. She also said that initially, making payments were simple because she paid $450.00 for every day the captain flew the plane for them. However, as they got busier with the additional practice locations, payments became more complicated because she had to add meals, hotel, and credit card as well. The captain was issued a Visa credit card to make payments to vendors, particularly for airplane fueling purposes easier. Also, if the captain flew with a co-pilot, then Ms. Vann paid for the co-pilot as well.

Ms. Vann stated that the Pavilion Group was another one of Dr. Roth's company which owned the airplane. The Captain would let Dr. Roth know if any maintenance was due or necessary for the plane. He also performed minimal work such as oil change on the plane. She said the captain was meticulous and precise. He also owned Executive Shuttle, the company he operated with a few planes. She stated the address for Executive shuttle was: 322 Terminal Rd, Greenwood, S.C. 29649. She also provided the captain's phone number. The captain had also signed up with a company named UV in order to purchase fuel at a discounted price. He would purchase minimum fuel at airports to avoid landing fees.

Ms. Vann stated that she had flown with the captain and thought he was very good. She said he was very cautious with weather conditions affecting flights and would even cancel flights if necessary. When they would arrive at one of the other locations, he would go to the pilot's lounge and sleep in the Lazy Boy chair. She would normally leave the lounge about 8:00 a.m. and find that he was still sleeping in the chair. When he was awake, he would work on his iPad, taking care of his other business. The co-pilot would usually sleep as well; however, the co-pilots varied. Some she knew from previous flights and they would rotate and others she did not know.

She also stated that Dr. Roth paid for the captain's training. They had paid to have the captain train on this particular airplane which they had purchased in June of 2012. The captain also received his two week training on the plane that same month. She said she was not aware of any FAA interactions with the captain and if there were any interactions they would be in Greenwood, S.C. where the Executive Shuttle was located.

Ms. Vann said that overnight trips for the captain were not too frequent. They were mostly on the vacation trips that the Roths would take. Occasionally, if there was not enough time to go back from Augusta to South Carolina and back again in the morning, the captain would spend the night at a hotel. She said that the flight schedule for the past week was the standard times and that she also flew with the captain and the co-pilot on Tuesday, February 19th, leaving around 7:00 a.m. and returning around 4:00 or 5:00 p.m. She indicated that there was nothing different or unusual about the captain on that day.

Ms. Vann said that Dr. Steven Davis was one of their contracted employees at their Nashville office. He was the brother of Dr. Keith Davis who had passed away in 2009. Dr. Keith Davis was the person who started the practice with Dr. Roth. However, Dr. Roth was the sole owner of the practice at the present time. The other employees were Dr. Mark Benak at the Atlanta office and Dr. Josh Milligan also at the Nashville office.

Interview concluded at approximately 1600.

5.0 Interview: Connie J. Dodson – General Manager, Corporate Flight Management (CFM)

Date: February 24, 2013
Location: KJWM Airport terminal
Time: 1037 CST
Present were: David Lawrence, Maryam Allahyar – NTSB

Ms. Dodson declined a request to have a representative accompany her.

During the interview, Ms. Dodson stated the following:

- She began working at the airport in July 1991.
- She said she knew the accident crew.
- The crew did not have a locker at the KJWM airport to store things, and the passengers would travel by rental car when they arrived.
- She said the N777VG was always kept on the ramp when they arrived except for when they would put it in a hanger during freezing rain or drizzle.
- She said she knew Rick Trammell for about 5 years. She said he told her he was an FBO operator out of South Carolina; she thought it might be in Greenwood. She believes he still was at that airport.
- She said that Rick would also fly with another co-pilot named Josh when he flew in on the BE200.
- She said Jeremy would also fly with Rick on the BE200.
- She said that N777VG kept a normal schedule, and every Wednesday they would arrive at KJWM at about 0430 to 0500 local. She said the airport was open 24 hours.
- She said that both pilots would walk straight into the crew lounge and take a nap. The pilots had arrived before her shift started on the day of the accident.
- They would service the airplane between 8 and 9am for fuel or other needs.
- She said they would run the pilots to breakfast, and would drive over to pick them up.
- She said Rick was a "very even keel guys." She did not know if he had any medical issues, but she remembered that they once discussed her diabetes, and she had comment on Rick's weight loss. She also knew he was married.
- Both pilots were already at the airport when she arrived, and they ran Rick to Subway for sandwiches around 830 or 900am, while Jeremy stayed in the pilot lounge, and she saw Jeremy come out after what she believed was a nap.
- Jeremy had been coming to the airport for about 1-2 years, and was a "quiet, shy guy."

- She did not know why Rick flew with an FO, but thought it might have something to do with insurance requirements based on Rick's new type rating.
- She said Rick flew with a co-pilot (Josh) even when he flew in with the King Air.
- She did not know if the Premier ever needed maintenance, but Rick always took fuel when they flew in. She did not remember anything unusual with the airplane on the day of the accident. She said there was a maintenance shop on the field if they needed it (Chad Goddard – Cumberland Avionics – [redacted] – Hanger 1).
- She said the pilot's routine on the day of the accident was not unusual. After breakfast, they went to the break room. Before that Rick gave her a fuel order; 90 gallons on the left and 80 gallons on the right. They were not catered, and she never saw them cater the Premier, though they had asked for special service in the past like sandwiches.
- She said at first Rick would not let them fuel the Premier unless he was around. About 60 days ago he started to let them fuel without him. She said he was worried about "scuffing the wing."
- She said the airport had security cameras in control of the airport director.
- She did not remember seeing either pilot flight planning in the planning room.
- She said Rick would sit around and make phone calls. The conversations she heard were sporadic, and usually involved one of his aircraft that was in maintenance at one of his shops in South Carolina. He was not on the phone all day.
- She said they always filed flight plans.
- The weather on the day of the accident was decent with a little overcast.
- She remembered a conversation with Rick about deer on the runway at the airport in South Carolina, and he asked about the fencing around her airport. He had mentioned to her something about an airport that had just got a grant to construct a fence around its airport.
- It was busy on the day of the accident. That morning, Flight Solutions came in, then another crew. Most all the crews coming in that day were not staying over, just picking up passengers and leaving. Rick and Jeremy were the only ones hanging around that day. The few that came in hung around the lobby.
- Rick always took fuel when they arrived, and it varied from about 70 to 100 gallons per side.
- She said she never saw them do a weight and balance, but if he did not do it "it would surprise me since he seemed very conscientious." She had witnessed him thoroughly walk around the airplane, and that was something she didn't see all pilots do.
- She had never flow with either pilot. She remembered that he commented to her that his airport was never as busy as hers.
- She said Josh was also a mechanic on the King Air.
- She said she had never seen the Premier go around, and she said there were never any issues with his takeoffs. She said "he never hot-dogged" and was "by the numbers." She said "he had respect for airplanes." She said Rick was "by the book."
- When asked about any possible stresses in Rick's life, she said, she said she did not know of any other than him telling her about his daughter moving in with his grand-children. She said the last conversation she had with Rick was about her husband.
- She said Jeremy was in the conference room around 11am and complained about it being cold in there.

- She said she always assumed they were sleeping in the pilot lounge by the way they came out and looked.
- She said they always took a late lunch around 2pm and returned around 4pm.
- She said in the past nine months they had been coming one Saturday per month as well but they arrived later and departed earlier than Wednesdays.
- She said she had limited interaction with Dr. Roth, but they did discuss a discounted fuel deal.
- She said she never saw Dr. Roth try influencing Rick regarding flying.

Interview concluded at 1140.

6.0 Interview: Joshua Wiseman – CFM Line Service Technician
Date: February 24, 2013
Location: KJWM Airport terminal
Time: 1140 CST
Present were: David Lawrence, Maryam Allahyar – NTSB; Ronald Barnum - Representative

Mr. Wiseman declined a request to have a representative accompany him.

During the interview, Mr. Wiseman stated the following:

- He was a line service technician with CRM and was 22 years old. Previously he worked on Blackhawk helicopters as a mechanic.
- He was working on the day of the accident, and reported to the airport at about 14:20 local.
- He said that he knew the crew, and saw them just about every Wednesday.
- He said that he spoke with both accident pilots on Wednesday, and went to go pick them up at the Steakhouse BBQ restaurant (Low/Slow BBQ) at about 15:30 and drove them back to the airport.
- He said their conversation in the car was normal, and nothing out of the ordinary.
- When they returned to the airport, Rick went into the conference room around 1630-1700 and began to work on his computer.
- He said Jeremy wen to the crew lounge, and the door was not closed. He did not know if Jeremy was sleeping, but saw that the TV was on.
- He noticed that the passengers pulled up to the airplane in a rental car, and loaded into the airplane, but didn't actually see the loading. He usually didn't see a lot of bags getting loaded on the plane.
- He said he had fueled N777VG before, but not on the day of the accident. They usually took about 70-80 gallons per side.
- He said he did not see the crew actually walk around the airplane on the day of the accident, but had seen Rick walk around the plane in the past. Rick was meticulous about the plane.
- He did not notice anything unusual about the crew or airplane on the day of the accident.

- He said the engine startup was normal, but couldn't remember if he saw them taxi out or depart.
- No one told him about any FOD or oil around where N77VG was parked, and he didn't see anything there.
- He said Rick asked him if they could bring a power cart up to the airplane so they could update the GPS, but he told them they didn't have an operable power cart.
- He said he did not recall ever seeing N777VG experience any mechanical issue.
- He said both crew members were in a good mood, and there was nothing out of the ordinary.

Interview concluded at 1200.

7.0 Interview: Levi Holdcraft – CFM Line Service Technician
Date: February 24, 2013
Location: KJWM Airport terminal
Time: 1200 CST
Present were: David Lawrence, Maryam Allahyar – NTSB; Ronald Barnum - Representative

Mr. Holdcraft declined a request to have a representative accompany him.

During the interview, Mr. Holdcraft stated the following:

- He was a line service technician with CRM and was 22 years old.
- His job entailed refueling, towing and parking airplanes on the ramp.
- He arrived at work at 14:00 on the day of the accident.
- He did not know the accident crew, but spoke with them when he saw them in the lobby of the airport, and he said they appeared fine.
- He took them to lunch at the Slow and Low BBQ at about 14:30. He said they were there for about an hour, but couldn't remember if he saw them come back.
- While N777VG was parked on the ramp, it was not connected to a GPU, and was chocked.
- He believed he had fueled the airplane in the past, and it usually took about 100-200 gallons.
- He never saw or heard the airplane have any problems.
- He did not remember seeing the airplane depart.
- He said both pilots were in good moods going to the restaurant.
- He did not see any oil or FOD on the ramp after N777VG departed.

Interview concluded at 1215.

8.0 Interview: Jeremy Bruce Hayden, Co-Pilot – Executive Shuttle
Date: March 4, 2013
Location: Greenwood Regional Airport

Time: 1405 EST
Present were: David Lawrence, Maryam Allahyar – National Transportation Safety Board (NTSB); Scott Marshall – Federal Aviation Administration (FAA); Mark Mohler –Hawker Beechcraft

Mr. Hayden was represented by his counsel Mr. J. Arthur Mozley.

During the interview, Mr. Hayden stated the following:

He was 40 years of age. His total time in Premier aircraft was between 40-60 hours. He began flying the Premier in July 2012. He worked for Executive Shuttle doing business as Sky's the Limit, and he received 1099 tax forms from Executive Shuttle.

On Tuesday February 19, 2013, he and Mr. Trammell took the Vein Guys staff to Olive Branch around 0800 and returned around 1600 to Thomson. He went home after they arrived. His drive home took approximately one hour.

On Wednesday February 20, 2013, they left Thomson around 0400 and then left John Tune around 1800 central time.

On Monday February 18, 2013, he did not fly. He stayed home and did routine activities.

He said that he flew with Mr. Trammell about every other week and most flights had been in the Premier. He was a charter pilot for Mr. Trammell's operation also. At times, a month may have gone by before he would fly in the Premier. However, when he did fly the Premier, it was only with Mr. Trammell. His main role when flying the Premier was running the radio and programming the Proline 21, and he said he was getting comfortable programming it. For the first few times, once they reached altitude, Mr. Trammell would let him take the controls to get a feel for the aircraft. In the past couple of months, he had been given the opportunity to take-off and land as well. He said that for the early morning departures, they always flew with 2 pilots. However, on leisurely trips, Mr. Trammel would fly single pilot.

Mr. Hayden thought flying with Mr. Trammell was educational because he was very knowledgeable. He had learned a lot from Mr. Trammell in the past 2-3 years and he was a good teacher, and he enjoyed flying with him.

He thought the Premier had been checked for maintenance at Beechcraft at least 3 times. One of these was because of an autopilot issue. He said Rick had an on-going maintenance program with Hawker Beech, and "he didn't shy away from taking it over" to them.

On the day of the accident, he woke up about 0215, got ready, and drove to Thomson. There was nothing unusual on the departure from Thomson. Mr. Trammell was inside running his checklist when he helped the passengers load up. There was not much to load that day except for lunch bags that went into the nose compartment. The departure was normal, as was the trip to Nashville.

When they arrived in Nashville, he went to the pilot lounge to take a nap. He slept in the chair closest to the door and Mr. Trammell took the chair in the corner. He slept about 4 to 5 hours, and woke up about 0930 or 1000 central time. It was too late for breakfast.

When they were in Nashville, Mr. Trammell usually brought his paperwork to work on while Jeremy watched a T.V. If Mr. Trammell needed help on some of his paperwork, he would ask him for help. They talked about the CRM portion of the training manual for the 135 operation for which they had received final approval. They went to lunch around 1500, and their passengers arrived around 1800 central time to load up. They took off on runway 20 and had good VFR weather for departure. They called Nashville departure for their IFR clearance. There was nothing unusual or remarkable about the flight.

On descent, as they were coming down, he was talking to ATL. He remembered them clicking the lights up for Thomson. ATL handed them over to Augusta. He and Mr. Trammell talked about canceling IFR, so they did cancel with Augusta approach. That was about 5 miles from the final approach fix on approach. Mr. Trammell had the visual approach set up in the Collins Proline. He recalled his HSI being set on ILS with runway 10 dialed in as a reference. He mentioned to Mr. Trammell that the "gear was up", and Mr. Trammell put the gear down. Mr. Hayden called 3 green and read the airspeed indicator "for Ref + whatever." He could not recall anything unusual in the glide path. He called the refs and recalled being one or two knots above ref speed.

Mr. Hayden said he was positive that the airplane touched down. He believed they touched down within 200 feet of the 1000 foot marker, and he then began going through his paper checklist when he heard Mr. Trammell announce go-around. Mr. Hayden said "OK". He said that he was only looking at the airspeed. He said it was above 105 knots as they were approaching the end of the runway, and he thought it was going to be close. He said the engines made the same noise they would make on takeoff. Then, he thought something hit the plane on his side, and then remembered seeing trees in the windshield. Then next thing he remembered was the person with a flashlight yelling at him.

Mr. Hayden did not know why Mr. Trammell announced a go-around. He just thought about the airspeed and called it out. He thought they were on target, the nose came down, and he began to look through the checklist. He had no impressions that they were long or short. It took maybe "2, 3, or 4 seconds" until the nose came down and then another "2 or 3 seconds" when he heard Mr. Trammell announce the go around. He saw Mr. Trammell's arm going forward when he called the go-around as he was flipping through the pages for the after landing checklist. He could not recall if Mr. Trammell deployed the lift dump or flap handle. However, the lift dump had been armed because he read the checklist for Mr. Trammell and the lift dump was armed.

This was Mr. Hayden's first go-around in the Premier. He had not committed to his memory the procedures for this aircraft's go-around.

He said that the fuel was a little over 1000 pounds of fuel in each side but he could not recall the take-off weight. Mr. Trammell flew both legs that day. The arrival brief from Mr. Trammell was for visual conditions. Mr. Trammell had looked up the projected landing weight but it was not in

the primary flight display. He had the "impression" that the ref they were using was 114 but then again that was what they normally used. There was no turbulence. There was little tail wind of 70+ knots on the flight from Tune. The METAR had said there was a 3 knot tailwind, but the AWOS said the winds were calm. They used 5 mile final VFR. He listened to AWOS when they were on with ATL. The ground speed was not significant to draw his attention.

He said Mr. Trammell used TOLD cards. Mr. Hayden did not do the TOLD cards even though Mr. Trammell had shown him how to do the cards. He said he was not responsible for them.

Mr. Trammell was hand flying the approach at least for its last minute or two. He did not hear any alarm or aural caution prior to the go-around. Everything looked normal. He called the gear down and 3 green. However, Mr. Trammell decided where and when he wanted the flaps. Mr. Hayden thought that if the flaps were not put down, then that would have been abnormal, and he would have noticed that.

He said they tried to turn the runway lights on as early as they could, usually about 15 miles out. Mr. Hayden would turn them on bright and when they were ready for landing he would turn them three clicks to low to avoid the black-hole effect. He recalled seeing the runway lights but not the PAPI lights but he was not looking for them either. He was not familiar with what illumination setting would not illuminate the PAPI lights.

He said that he heard the engine performance increase for about a couple of seconds during the go around. He thought they were coming up to the end of the runway pretty quick, going over 105 knots.

He said he never got any formal training on the Premier. It was only with Mr. Trammell after he became comfortable with the aircraft himself. They did a simulated single engine go around October 2012, and he also received an SIC signoff from Mr. Trammell. He did not think that the single engine approach was a big deal. He thought the reason why they were doing the 2 pilots with the Premier was because Dr. Roth wanted to go to Turk's and to meet the ICAO requirement, and they may have had to have an SIC. The doctor did not end up going to the Turks.

On the day of the accident, he did not recall giving a briefing on the seatbelts. Mr. Trammell usually did the briefing if there was going to be rough weather ahead. They did however, turn the seatbelt sign on. He could not recall anything specific on this flight about the seatbelt briefing. The seatbelt sign was turned on/off based on the checklist. He did not remember this particular flight being bumpy enough for Mr. Trammell to leave the seat belt sign on.

He could not recall the time he went to bed or sleep on Sunday night, February 17, 2013. He woke up about 0600 or 0630 on Monday morning because they have a five month old. He went to bed about 2200 on Monday night and awoke about 0530 or 0600 on Tuesday morning. He was not certain about when he went to bed or fell asleep on Tuesday night, but he estimated it to be around 2000. He awoke around 0200 or 0215 on Wednesday morning. When he arrived in Nashville, he was able to fall asleep.

He had no problem sleeping and had no sleep disorders. He normally ate 3 meals per day plus some snacks. He had not had any recent major weight gain or weight losses. The only change in his life was the arrival of their new baby who was 5 months old and he had had time to adjust to it. He had no recent changes in his vision or hearing. His last alcoholic beverage was in 2008 since working for Mr. Trammell. Because of his job, it was not feasible to drink if he was to be called to work. He said he knew about his schedule for the week of the accident at least a week in advance.

When it came to CRM, he said Mr. Trammell was very clear about his expectations particularly what he wanted and, more importantly what he did not want him to do when they flew together. He said that when Mr. Trammell was flying, "he was flying" and did not want him to adjust anything without letting him know.

He said he pulled out the "flip book" to read the checklist, and Mr. Trammell used the electronic checklist. He did not remember what Mr. Trammell had set up on his side for this particular approach, but typically he would set up a 3 degree visual approach in the FMS.

He said his impression was that they touched down at "or within a couple of hundred feet" of the 1000 foot markers, which was normal. He said he remembered looking up and seeing the markers, and "they were where they should have been." The nose gear came down normally, and he was done looking at the airspeed, and began to go through the checklist. He said his best guess was that it was about 5 seconds after the touchdown to Mr. Trammel announcing the go around. He said the touchdown was normal.

Interview concluded at 1515.

9.0 Interview: Richard Zachary Trammell, Chief Pilot, Director of Operations, Owner – Executive Shuttle

Date: March 4, 2013
Location: Greenwood Rehabilitation Hospital
Time: 1050 EST
Present were: David Lawrence, Maryam Allahyar – National Transportation Safety Board (NTSB); Scott Marshall – Federal Aviation Administration (FAA); Mark Mohler – Hawker Beechcraft

Mr. Trammell was represented by his counsel Mr. J. Arthur Mozley.

During the interview, Mr. Trammell stated the following:

He was 56 years of age. He worked for Executive Shuttle and that Pavilion Group hired Executive Shuttle's services. The first doctor he worked with was Dr. Davis, whom had passed away since, had a contract with Executive Shuttle. However, since the doctor was never able to provide the criterion of the contract to Mr. Trammell, there was never a signed contract between them. He said they originally bought a King Air 300 to operate in 2008.

Mr. Trammell said that he took Dr. Roth and his family to Orlando, FL Executive on Friday at or about 1230 EST and stayed in Orlando until Monday morning when they departed at 0930. Initially, he thought they were going to go to Atlanta as Dr. Roth did every Monday; however, Dr. Roth told Mr. Trammell that they were going back to Thomson, and arrived around 1030. Mr. Trammell changed his flight plan after take-off. He did not consider this a big deal since the first 3 waypoints for Atlanta and Thomson were the same. Their flight from Orlando to Thomson was just about an hour.

He flew Kelly Vann and Sandy on Tuesday about 0730 to Olive Branch, MS since the Vein Guys were planning on opening an office in Germantown. They stayed there until about 1500 central time and returned to Thomson around the airport closing time of 1700. He then fueled up the plane for the following day. He sometimes would stay at the Comfort Suites, but that night he elected to drive home to Greenwood. He said Wednesday was a "tough, tough day." He arrived home around 1820 on Tuesday night, but had to depart his house on the morning of Wednesday, February 20th around 0230 to go back to Thomson, arriving there around 0330 to prep the airplane for the 0400 flight to Nashville.

He usually took Jeremy with him as his co-pilot as his "first choice" because he was the full time employee of the Executive Shuttle and he wanted to make sure he was taken care of. He also took Willis P. Lyle II with him at times and a couple of times Dan Gibson was his co-pilot to work the radios. He said he usually always asked for a co-pilot on the early morning legs. He said when they were originally hired to fly the group, they started at 0500 for their departures, and he used another typed pilot to fly them, and would have the "buy-low" pilots who had previously lost their jobs to sit in the right seat. If they had a few "tough days", he would just get another one of those pilots to fly along with him.

Mr. Trammell said that he had used the FAA SMS tool to understand the risks and find out how to mitigate some of the risks. His score was 24 out of 25 on the risk assessment for those flights into uncontrolled airports, and it would jump back down to a score of about 20 when they went to RDU since it was a controlled field, so he talked to his boss Dr. Roth and asked for a co-pilot as a way to mitigate the risk on all early morning flights since he was new to the airplane. He also asked the doctor to buy him a "full service contract" so he could go back to school when he wanted instead of just yearly for his 61.58 check. His first training at FlightSafety was June 26, 2012. His second training was at Wilmington on January 5, 2013. The 6 month check was not required, but he said he learned "a lot of stuff" by getting another FlightSafety instructor's spin on the training.

He said he did a 61.55 check for Jeremy. On the Premier aircraft, Mr. Trammell did the take-off and landings into Thomson. He would let Jeremy do the landings at Raleigh since it was a longer runway, and Jeremy did a "super job."

He did not recall anything outstanding on the maintenance. He did, however, have two lift dump problems. One was on a landing in Raleigh on 1/24/2013 where the lift dump did not deploy. He later checked the system and it worked fine. He talked to Michael Johnson at Hawker Beechcraft Fulton about the problem and was told to go through the trouble codes. Mr. Trammell found nothing in the codes, and was told that this could be an issue if one wheel touches ground for 4

seconds and the other does not. When he went back to school, he inquired more about the problem, and he was told this could not happen. He called and emailed Jeffrey O'Neil in Tampa. He was told again to look at the trouble code diagnosis, but he did not find any trouble codes. He was told that without any trouble codes they could not help him.

On the day of the accident, they departed around 0407 and received their clearance in the air since they had problems getting clearances at that airport at night. It was a good day. They arrived to Nashville early and had visual landing. After arrival, Mr. Trammell went to the pilot lounge and slept for about 4 and a half hours. He woke up and went to Subway for breakfast and had lunch later in the day. About 1600 central time, he asked for fuel. After passengers arrived about 1700 central time, they took off to south. Winds were calm and clearance was no problem. They were cleared direct to Choo Choo.

They were on profile on landing at Thomson. He was using the electronic checklist. They went over Athens, GA which was about 5 minutes out. He saw the runway and could see his home airport of Greenwood as well. As they were descending, he asked Jeremy to cancel IFR with Augusta. He wondered about landing lights at that time since they were too dim. He said the landing lights on this airplane are "terrible." He looked up to make sure the landing light switches were on during flare. He said an upgrade of the landing lights was available, but they had not done that available upgrade of the landing lights on that plane. The next memory he had was when he was in the hospital on Sunday.

Mr. Trammell remembered seeing the runway lights. It was VFR. Jeremy had turned the runway lights on. He said the Thomson airport had had many light problems, and said "you sometimes didn't know what you were going to get." Some mornings he would see the taxiway lights and runway on, then the taxiway lights go off when he was ready for takeoff. He said most of the problems had been fixed lately. He was aware that the PAPI lights would not work unless the runway lights were set on bright. He had talked with the airport manager about this. He did not recall seeing the PAPI lights that night. Additionally, being on a 5 mile final on the visual approach in the FMS that he drew, he would not be able to see the PAPI lights from that angle.

Mr. Trammell said had executed go-arounds in the premier in the past. The first was when he and Jeremy were returning after the purchase of the aircraft, the first time he and Jeremy had taken the airplane to Thomson. He felt he was coming in too high and too fast. The other time was on a non-precision approach that did not have vertical guidance, and he had received a bad turn on. He had only had the balk landing in the simulator training. From what he could recall, the balk landing required: pitch, power, flaps 10, positive rate, and gear up. When asked if there was pitch guidance on a go-around, he said you could set the pitch bars, and that the go-around button would give a pitch up of 10 degrees. He said he had never really had to do that in real life. On a GPS approach, when you hit the go around button, it would knock the auto pilot off, pitch up and then sequence you to the next waypoint. It would not do that on an ILS, and you would have to click it off and get it back onto flight management. He said that this airplane had a Vref of 1.23 Vso instead of the normal 1.3 Vso, and was told it was the only airplane out there that had this in order to keep the landing distance down.

Mr. Trammell said that the BOW (Basic Operating Weight plus the pilot) of the aircraft was 8200, with 950 empty weight (passengers and co-pilot), and 1200 pounds of fuel to return from Nashville. On landing, he expected about 400 pounds of fuel on each side but since they had a good tail wind, they most likely had about 500 pounds of fuel on each side.

He flew the leg from Nashville to Thomson. He normally flew into Thomson because it had a 5500 foot runway. He said there were no aural warnings or master cautions during the flight that he could remember. Prior to departure, he checked the weather. He thought Jeremy would remember the weather condition better since it was part of his duty. He also added unless there were very strong winds, the preferred runway for landing at Thomson was runway 10. He said that there is a .7% upgrade on the runway 10; however, that would be on the eastern part of the runway. Runway 28 was too steep at the end. He preferred not to land on 28 since "it was really going downhill." The winds on the night of the accident were possibly 2 knots of tail wind, but he said that was still preferred against a downhill landing on runway 28. He did not remember much winds aloft that night. He said he had seen where there was a 62 knot wind at about 3000 feet and 8 knots on the ground. He said that the Premier Collins Proline 21 screens had a wind readout.

Mr. Trammell calculated the weight of the plane at landing as the following:

8600 (BOW which included the pilot) + 950 (co-pilot & passengers) + 900 (least amount of fuel remaining) = 10,450

He said he entered this information in the box prior to departure and it was accurate with landing weights.

Mr. Trammell used TOLD cards; however, it was Jeremy's duty to enter the information electronically. Once all the information was put into the FMS, the TOLD cards would go away. He stated that over Athens' configuration would have been clean, and then 5 miles away from the 5 mile final, they would go from 250 to 200, and then slow to 200 at the 5 mile final. Once they were below 200, then he would have flaps, drop the gear, and unlock the lift dump, and slowing from Vt to Vref at 50 feet above the runway. He thought that a normal landing distance for the Premier would be about 3200 ft. He said it would stop in a shorter distance. He recalled filling out a TOLD card with the expected landing distance, but did not remember what the landing distance was. For a go around, essentially at 400, you would level off and accelerate to 140 knots and fly out at 140 knots. If you had two engines, "you're going to blow past that."

Mr. Trammell could not recall whether he made any calls or heard Jeremy make any calls after canceling IFR, nor could he recall whether they touched down. He said that normally you would get an electronic 2500 foot call out off the radar altimeter and 500 foot from minimums, and Jeremy would be observing this, and on a visual approach there would be very little callouts unless he was out of parameters. He said that he had never seen any deer on the runway at Thomson, and said he would sometimes do a runway check at Thomson in his car to check for deer and other things. He also added that for the go-around, it would be pitch and power simultaneously, and the captain would always do the gear since the handle was on the left side, and would be to his discretion whether he or the co-pilot would do the flaps.

He felt the Premier had "unbelievable" go-around and takeoff performance. The only performance problem he had was a 35C takeoff in the simulator out of Steamboat.

For his training, the FlightSafety was a17 day training. He had done 16 days. He said that 50% of the training was getting used to the Collins Proline 21 FMS system, and "it was not user friendly until you got used to it." The learning curve was very steep for the FMS. The training was no nonsense with no breaks. He felt he was a little slow at first, but by the check ride he was ready. This aircraft was different from King Air which he had flown for a long time. He said "you would have to put everything in there" on the FMS for the Premier. He said that a requirement on a stage check during training on the Premier was to sit down and have everything ready to go at the end of the runway in 45 minutes.

In response to seatbelt announcements, Mr. Trammell said that he went by the 135.117 standard announcement. He could not recall who did the brief for the seatbelt sign but thought Jeremy would have been the one to make the announcement while he was in the cockpit starting the engines. He did not recall seeing if the passengers had their seatbelts on, and could not see them from his seat in the cockpit; however, on descent around 10,000 he would turn the seat belt sign on. He would also brief the passengers to have seatbelts on if they were to encounter rough air. He also said that there were passenger briefing cards in the pockets as well.

He said he was not a "late person." He went to bed on Sunday February 17, 2013 around 2200 and awoke on Monday around 0600 or 0630. He went to the airport around 0830 for the 0930 flight back to Thomson. After landing in Thomson, he drove back to Greenwood, and he went to bed about 2100 and awoke around 0500 on Tuesday. After taking the Vein Guys staff to Olive Branch, he did not go to the pilot lounge to sleep but rather he looked around the airport. He wanted to assess the airport since Vein Guys were considering opening an office there. He checked out the crew bunk room and thought it was very adequate, but he did not sleep there. After they returned to Thomson that afternoon, he drove back to Greenwood and went to bed about 2100. He woke up around 0200 on Wednesday morning to be back at Thomson. He only got about 5 hours of sleep that night. When they arrived in Nashville, he went to the pilot lounge and slept for about 4 hours.

He said when he started working for this company, he had no idea what the schedule was going to be. The company, Pavilion, did not tell him about the days getting longer. He had done the SMS risk assessment and told Dr. Roth and Kelly Vann about the SMS worksheet. He thought he could get some rest at Tune but that the terminal was laid out poorly. He made an issue of this, and he had called Kelly Vann to discuss it on the day of the accident. He knew with 200 hours on this plane, the risk factors would have dropped. If it was a 135 operation he would have to get a room to get proper rest.

Mr. Trammell said that he slept "very, very well" and the only time he had trouble sleeping was during the 2008 financial crisis. He did not take any sleeping medications prior to the accident. He was trying to eat better and go to the gym. He generally ate at least 2 meals per day. On the day of the accident he went to Subway for breakfast and had lunch/supper around 1400 or 1500. He had had no major weight gain or weight loss recently. His life was very stable being married

for over 37 years. His FBO had grown, and he "could put it on autopilot" and it did not require much attention. He said he started flying for "this group" only 2 days a week, but it had grown more recently. He did not have any recent changes in his vision or hearing and had not consumed any alcohol since he was 19 years old.

He said he once attended an SMS seminar at Milliken, and had used the SMS form from the advisory circular. He had told Kelly Vann about the SMS form he used and the risk factors. He never really got to talk to Dr. Roth because Dr. Roth never had any time, and Dr. Roth gave Mr. Trammell "3 minutes per week." Mr. Trammell printed out the SMS information and gave it to Dr. Roth but he did not know if Dr. Roth ever read them. Dr. Roth never gave Mr. Trammell feedback on it. Mr. Trammell always wanted a co-pilot on this aircraft because that was one way to mitigate the risks. Pavilion Group could not understand why since he had flown the Beech 300 single pilot. He said that he would have loved to have another co-captain for this airplane.

In the past, he had delayed flights or diverted flights to BNA but never cancelled any because he did not feel well. He said that with Dr. Davis, they would discuss whether it was good to go or not based upon the weather. He said it was not the same with Dr. Roth.

Jeremy had only trained on the Premier as the co-pilot in the airplane and did not have any simulator training. He said the initial rating course on the Premier was $32,000. He had flown with Jeremy on the Premier since the day after they got the airplane. Jeremy would not have qualified on the insurance as a captain. He brought the airplane back from Hawker Beech Atlanta, and while they were repositioning the airplane to Thomson they did some training on it.

On one occasion, the BNA tower had been abandoned because of the winds exceeding 50 knots. But he got close and was able to get in Tune for landing.

When he went to FlightSafety, he wanted to do the full service contract so that he could go back anytime he wanted to get extra training. He originally gave the SMS form to Dr. Davis, and also gave Dr. Roth the SMS results from the risk assessment tool from the advisory circular when starting on this aircraft and again recently. He felt he had the ability to tell Dr. Roth that he would override a go/no go decision. However, he did not have a say in the schedule. They had told Mr. Trammell the schedule would change after the beginning of the year.

Mr. Trammell said he was concerned about the lift dump issues and the different answers he had received from different tech representatives.

Interview was concluded at 1220.

9.1 Trammel Medications During Time of Interview

Lawrence David

From: J. Arthur Mozley <[redacted]>
Sent: Monday, March 04, 2013 8:42 PM
To: Lawrence David
Subject: Fwd: Rick Trammell medications

Dave--
Here you go--Jenny is a great daughter--
Let me know if you need anything else.
Arthur

Sent from my iPad

Begin forwarded message:

From: Jenny Trammell <[redacted]com>
Date: March 4, 2013, 3:51:04 PM EST
To: <[redacted]com>
Subject: Rick Trammell medications

Richard Trammell current/active medications:
Colace 100 mg twice per day for bowel regimen
Erythromycin opthalmic (eye) ointment 0.5% four times per day for corneal abrasion
Benadryl 25 mg every night at bedtime for sleep
Vytorin 10/20 one per day for cholesterol
Arixtra 10 mg once per day in the evening- blood thinner for blood clot
Warfarin/coumadin 5 mg once per day in the evening- blood thinner for blood clot
Zoloft/sertraline 25 mg once per day for mood/depression
Ativan/lorazepam 0.5 mg every 6 hours as needed for anxiey or muscle cramps
Tylenol 650 mg every 6 hours as needed for mild pain
Tramadol 50 mg every 6 hours as needed for moderate pain
Percocet 5/325- 1-2 tablets every 4 hours as needed for severe pain
Anusol/hydrocortisone 25 mg suppository- one per rectum per day as needed for rectal pain/bleeding

All of these medications are new since the accident except for the vytorin 10/20 which he was taking prior to his hospital admission, along with Lovaza 1 g (4 capsules) per day, which is for high triglycerides.

I am heading back to Florida this afternoon but am available to be of any assistance that I can offer. Thanks for your time and working on behalf of my dad.

Sincerely,
Jenny Trammell

10.0 Interview: Joshua Williams – Former Executive Shuttle pilot

Date: March 11, 2013
Location: via telephone
Time: 1405 EST
Present were: David Lawrence, Maryam Allahyar – NTSB

Mr. Williams declined a request to have a representative accompany him.

During the interview, Mr. Williams stated the following:

His name was Joshua Douglas Williams, and he was 38 years old. His flying background included 18 years of experience. He started as a CFI when he was 24 for 4 years before starting to fly for Rick Trammell when he was 28. He flew for Rick for 9 years in a variety of equipment. He left Rick's employ in February of 2012, and currently worked for Venture Aviation, mainly

flying the King Air, and some Bonanzas, Barons, twin Cessna's, and a Pilatus. His title there was Captain on the DC12 and King Air series. He flew on average of about 450 hours each year. He had 5600 hours total time, and 5450 hours of that was PIC.

He said he used to fly with Rick Trammell many times, but never in the accident airplane. He flew the King Air 300, 200, C90's, Barons and twin Cessna's with Rick, sometimes in a crew capacity with Rick, as well as training. He was employed by Sky's the Limit, Inc. dba Executive Shuttle.

He said Rick was very experienced and very skilled. He said he flew with Rick for over 9 years, and began as him flying in the right seat, and would train in the left seat. When they flew as co-captains, they would switch seats every other leg. He said Rick was easy to fly with and very crew oriented. They used SOPs as a standard, and "tweaked" them as they went along. Rick was one of the most knowledgeable people he flew with, and specific with the numbers for the airplane he was flying.

He said they went to SimComm once every year, and sometimes twice each year depending on the airplane and if they were going through an initial or recurrent or differences training. He said Rick had bee to "a lot of schools" for different types of training.

When they flew together under part 91, they continued to operate with the same SOPs they would use for the part 135 flights. Regarding compliance with the part 135 rest requirements, they used a duty sheet to monitor their times. It was rare they would ever exceed their duty times for the day, and he said it may have happened twice in the nine years he flew with Rick.

Rick flew for the part 135 operation "not very often", with charter being "dead" over the last 4 years or so. He said that the part 91 flying over the last 3 years was about 85% of the total flying, with the rest being the part 135 flying. The type of part 91 flying was almost all with the doctor's group, starting with the King Air about 4 years ago, and then going to the Premier this past summer.

He said he left Executive Shuttle last year because he was "worn out" form the type of flying they did. They had long duty days flying the part 91 operation. Their typical weeks would be to fly on Monday, Wednesday, and Thursday. The King Air he was flying for the doctors was based in Augusta. He would drive to Augusta, fly the airplane, and on "double days" like Wednesday and Thursday trips, they would either stay in Augusta overnight or drive home. He lived near Greenwood, SC. When they first started doing the double days, they would just drive home. They later began to get hotel rooms in Augusta since the rooms were cheap, and it was less expensive than driving round trip to Greenwood.

He said he never really dealt with Rick on trips since most of their flying was single pilot, so he did not know if the schedule was tiring for Rick. He didn't remember how the schedule load was divided between the two of them.

He said most of their flying was single pilot when Jeremy came around to volunteer flying in the right seat to gain experience and build some time. He said he also flew with Jeremy, and when

he stared flying, he had less than 1500 hours, and flew the airplane "as you would expect for someone with less than 1500 hours." He would conduct the takeoffs and climbs, and would let Jeremy hand fly the airplane at altitude while they swapped roles as PF and PM. He monitored Jeremy as an instructor, and would sign him off for dual instruction given. He said he was a CFI and an MEI. He said Jeremy's piloting skills were average, and flew the airplane well and was good on the instruments. He was a good pilot for the amount of time he had. Jeremy would sometimes attend SimComm ground school training, sitting in on training as a volunteer, and would sometimes get some simulator time. He did not attend the training as a paying customer. He did a good job with checklists and SOPs.

The airplanes they flew were all certified as single pilot airplanes, and Rick went to school and was certified as a single pilot.

He said Dr. Roth was the primary passenger on all the Vein Guys flights. When they first started flying for the group, they split time with a Dr. Davis, who helped start the Vein Guys group, until Dr. Davis passed away in 2012, and then Dr. Roth became the primary surgeon on the flights. He interacted with him often, and he never exerted any influence on him regarding the operation of the airplane. He never saw Dr. Roth get upset about a go/no go decision, and was trusting of the pilots. He said the scheduled days he had with the Vein Guys remained constant, but were always subject to change. They would leave Augusta at 0430 to be in Nashville or RDU an hour later, then leave to return to Augusta at about 5 or 6 pm. They did this every day except for Mondays, which were half days, and they would return to Augusta by lunch time.

He did not know about any financial difficulties Rick was having with the part 135 operation. He knew that the Baron was not flying, but the rest of the business Rick kept very close to himself. He did not know who owned the airplanes or if the business was profitable.

He said that he never saw Dr. Roth try to exert influence on Rick, mainly because they rarely flew together during single pilot operations.

He said in a King Air, a go around started with throttles full, flaps, and then positive rate and gear up, obstacles cleared then flaps up. He said in the King Air, there was a balked landing procedure for a go around. That was the only procedure for a go around, and it did not specify if that was in the air or after touchdown. In training, he remembered that they only did the balked landings when airborne.

He said he did not have experience flying into Thomson since all the King Air flying was out of Daniel airport.

In closing, he said that if Rick had touched down, that the normal landing is about 3000 feet. If they did touch down a little long, and may have had a problem like an anti-skid fail, which would add 89% to the landing roll, or a lift dump fail, which would add about 69% to the landing roll, and they decided they would not stay on the runway without overrunning, that may explain a go around after touchdown.

Interview concluded at 1455.

11.0 Interview: Norman Daniel Gibson, Aeronautical Services
Date: March 26, 2013
Location: via telephone
Time: 1300 EST
Present were: David Lawrence, Maryam Allahyar – NTSB

Mr. Gibson declined a request to have a representative accompany him.

During the interview, Mr. Gibson stated the following:

He was 58 years old and worked for Aeronautical Services, which was the FBO[1] at Greenwood owned by Mr. Richard Trammell. His certificates included commercial, twin, and CFI[2]. He had no type ratings.

He knew Mr. Trammell for about 20 years; however, he had been closer to Mr. Trammell for about six years. He moved away to Tennessee for about 12 years and then returned to Greenwood. He said he knew Jeremy Hayden also, but not very well. He had only seen him around the airport and thought Jeremy Hayden had been working there for a year or two.

He began flying for Mr. Trammell on and off for about 6 years ago. When he returned back from Tennessee, he was still an instructor pilot, so Mr. Trammell helped him get some flight time. He never flew on the part 135 for Mr. Trammell. He mostly flew the King Air 90 and a couple of times the King Air 300 and the Citation on part 91. He had been to the King Air school also, just to sit in on the classes. He flew on the Premier three times. He would ride along to "acquaint him more with flying". One of those times was to Raleigh. It was a quick trip and they had to come back home. Once it was to Nashville, and the other was PDK to Atlanta. The three trips were all last year, with October or November being the last one of them. They were all early morning departures. The one in Raleigh was very quick. The doctors said they had to come back. They were there for only a couple of hours. They returned from the trip from Atlanta around 5:00 p.m. and the one from John Tune was around 5:00 or 6:00 p.m. He remembered that it was not very dark when they returned. He said he only flew as an observer. He did not even work the radios on the Premier. He said it was a complex plane and Mr. Trammell was the only one who went to school on it. He did not know why Mr. Trammell asked him to go along. He said it may have been to give him the time or that he had an empty seat since the plane only required one pilot. Even on flights in the King Air 300, he did not fly the plane. He said Mr. Trammell may have just wanted the company or give him the opportunity to be exposed to more planes. Of the three times they had to go to Thomson, GA he thought he drove to Thomson once by himself and Mr. Trammell may have picked him up the other two times.

For their flights, Mr. Trammell would go through standard briefings for take-off procedures. As for the passengers, he was usually on board when the passengers arrived and Mr. Trammell would brief the passengers. Mr. Trammell would go through the standard procedures to keep him

[1] Fixed Base Operator
[2] Certified Flight Instructor

in the loop. Mr. Gibson did not do any call outs. The checklist was a graphic display on the instrument panel and Mr. Trammell would scroll down the checklist together and go over it. He said Mr. Trammell used the electronic checklist "religiously" on that plane. Every time he flew with Mr. Trammell, he used his electronic checklist.

He said Mr. Trammell's passenger briefings were "standard." For example, every time he flew with them, Mr. Trammell would close the cabin door himself. But there were times that they (the doctor or his staff) would open the cabin door on arrival. He did not know the details of the passenger briefings because he was already on board the plane when the passengers received their briefings. The Premier had seatbelt signs and a chime. Mr. Trammell always chimed coming out of altitude; following the standard procedure. Mr. Trammell flew as single pilot and would tell him what he was doing to teach him and keep him in the loop. He was used to flying King Air, 182's, and 335's but even something as simple as putting in the frequency for Atlanta, Mr. Trammell would do it and talk him through it.

There was nothing out of the ordinary with any of the flights to Raleigh, Atlanta, or Nashville. The only one he recalled was flying into Thomson-McDuffie where Mr. Trammell said he was going to do a go-around; but they were 5 to 10 miles out form the airport and everything looked normal to him. He said they went around and circled but it was "way out." This was at least last October and it was daylight hours. Mr. Trammell did not like the way it looked, so they did the go-around or perhaps circle to land. There was no elaboration on why they did the go-around since it was not a big deal. Mr. Gibson did not recall the go-around procedures.

Generally, there were a minimum of four passengers and may be even five. There was Dr. Roth, an office manager, an ultrasound person, and one additional staff. He never walked back to the cabin where the passengers were seated. Since there was no cockpit door, he could see the passengers, if he turned around, but he had no need to turn around and observe the passengers. He did not notice anyone moving around. If someone would get up and move around they could feel the movement. He had no recollection of people moving around.

He said a guy named "Skip" also flew with Mr. Trammell. Skip used to work for a company by the name of Davis and Floyd. He was a King Air pilot for about 17 years. He did ride with Mr. Trammell on the Premier but Mr. Gibson did not know when or how often. An individual by the name of Jarred Willis also worked for Mr. Trammell; however, Mr. Gibson did not know if he ever flew in the Premier. He thought Jarred Willis had been gone for at least three years.

He said Mr. Trammell normally flew 2 or 3 days per week, and when he was not flying he worked at the FBO. He also dealt with paperwork at the maintenance facility located at the airport. Mr. Trammell was not an A & P but he helped the maintenance facility with paperwork and parts.

He said if he was not flying for the doctor, Mr. Trammel was pretty much there at the airport. Mr. Trammell also flew the King Air 90 sometimes. He usually flew three days a week and was at the FBO two to three days a week. It would have been unusual for Mr. Trammell to fly on the 135 side and work the FBO on the same day. Usually, if he had a 135 ride, Mr. Trammell had Mr. Gibson at the FBO. He said when at the FBO, their longest day would be 0730 to 1800

Monday through Friday; but they were "not tied down." The weekend schedule was 1100 to 1700 on Sundays and 0800 to 1700 on Saturdays. Mr. Trammell was not always there since Mr. Gibson was also there four or five days per week on average. With the flying Mr. Trammell did for Dr. Roth after they picked up Atlanta on Mondays, Mr. Trammell spent more time flying and was at the FBO at most three days a week. Mr. Trammell did not have any concerns about flying for Dr. Roth or the schedule.

Mr. Gibson flew on the King Air with Mr. Trammell about 100 to 150 hours over a 6 year period. He flew the King Air 90. But the doctors were flown on the King Air 300. During the time he flew the King Air, he may have flown the 300 with the doctors once, flying out of Augusta to John Tune. Overall, he flew with the doctor and his staff four or five times at most.

He said the relationship between the doctor and Mr. Trammell was friendly. They were more like family. Mr. Trammell had been with them for several years. Dr. Roth would have Mr. Trammell and Josh Williams, who flew the 300, often bring their families when they went on vacation to the Bahamas.

He had only flown into Thomson-McDuffie three times. The only time there was an issue was when they did the go-around at 6000 to 8000 feet, guessing about 5 to 10 miles out. He said on that airplane, one could come down quick, coming out of altitude and going straight down to the landing. He said Mr. Trammell would set up something called a "Snow Flake". He would set up the Snow Flake to fly the plane down where it was on the glide path, the "VSI indicator." He called it the Snow Flake but to Mr. Gibson it was just the VSI indicator. When he was at altitude he would set up the Snow Flake so that, for example, when he was 5 miles out, he would be at a certain altitude to fly the approach in, even on VFR days. He would set it up to fly the approach he wanted and then hand-fly the last 200 feet. On the day when they did the go-around or circled the ground, it was VFR and daylight, and everything looked great.

He did not recall any flights where he and Mr. Trammell encountered an emergency and he had not heard from any other pilots about an emergency situation they had encountered when flying with Mr. Trammell. Even in weather, he did not recall having to do go-arounds many times. He said he loved flying with Mr. Trammell. He had known him for a long time and was comfortable with him. He thought Mr. Trammell was one of the safest pilots he had ever flown with in the 20 years he had been flying. He said he would not have a problem going to the back of a plane and sleeping if Mr. Trammell was flying. He thought of him as one of the most intelligent people, knowing all the regulations, and doing everything by the numbers. Mr. Trammell was also an instructor and was knowledgeable so he could relay the information to him. He learned a lot about flying from Mr. Trammell.

Mr. Gibson's total time was 1170 hours since 1994 or 1995. He held a commercial certificate for about 6 or 7 years. He was a private pilot when he was in Greenwood, prior to moving to Tennessee. He obtained the "reset" of his tickets when he was in Knoxville, Tennessee at Knoxville Flight Training.

Interview concluded at 1335.

12.0 Interview: Willis P. Lyle – Retired pilot
Date: April 1, 2013
Location: via telephone
Time: 1300 EDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Ernie Hall, Beechcraft Corporation

Mr. Williams declined a request to have a representative accompany him.

During the interview, Mr. Lyle stated the following:

His name was Willis P. "Skip" Lyle, II, and he was 66 years old. He had a commercial pilot license, an instrument instructor license, and a ground and advanced ground instructor license. He did not have an ATP[3], and did not have any type ratings. He said he was current in his flying status. He flew a King Air for 10 years up until February of 2012.

He was currently retired, but went "joy riding" with some guys, and a few biennial flight reviews. He used to fly for an engineering company for nearly 20 years, the last 10 years in King Airs, where he flew as captain on the King Airs.

He had the opportunity to fly with Rick Trammell when Rick first was getting his licenses. Rick flew with him a few times on the King air when he needed a co-pilot for any reason, and had known Rick for over 20 years. He never flew with Rick for his Part 135 operation, and only flew with Rick on Part 91 flights.

He did fly with Rick in the Premier. He said he flew with Rick about 10-15 times. None of the flights were scheduled. He said he "bugged" Rick to fly in the jet, Rick told him whenever he had an opportunity, and he would call and let him ride with him. He said that since Rick was, by nature, an instructor, and he would enjoy having someone ride along to talk about the airplane.

He said the last time he flew in the Premier with Rick Trammell, he believed was the day before the accident. They flew to John Tune up in Nashville. The weather was good, and it was a 42 minute flight. There was nothing out of the ordinary, and they climbed up to 28 or 29 thousand feet for cruise. The weather was VFR[4] at John Tune. They had left Thomson at about 4:30am. He drove to Rick's house, and they drove to Thomson together. Sometimes Rick would drive and sometimes he would drive.

He said Rick seemed fine for the flight, and had checked the weather the night before, and he would pull out the iPad to check the weather and preflight planning on the drive to Thomson. He said they arrived at Thomson about 4:00 or 4:15am. They pulled out the airplane and did the walk around, and Rick did the TOLD[5] cards. It took them about 20 minutes. It was an hour drive from Rick's house to Thomson.

[3] Airline Transport Pilot certificate.
[4] Visual Flight Rules.
[5] Takeoff/Landing Data card.

Rick would do the walk around, and would always load the airplane. He said he would also do a walk around after Rick out of habit. On the last flight he flew on the Premier, he did not notice anything out of the ordinary. He remembered that in the past there was oil leak, but believed they swapped the engines. For this flight there were no problems.

They fueled there in Thomson, and he would always buy fuel where ever they flew to. He did not remember how much fuel they put on that day, and the fuel loads would vary depending on weather and other issues like passenger load. He said there was never a time when fuel was an issue for their flights.

When he last flew to John Tune, Rick flew the airplane. He said Rick's habit was to brief him on what runway they would take off, what the Vrefs were, and once they got airborne and the plane cleaned up, Rick would put the autopilot on for climb, level off, and descent. He said Rick used the autopilot to fly the airplane down the glideslope, and would disengage it about 200 – 300 feet above the ground. He said he had never gotten to fly the airplane, though he and Rick had discussed it. He said he was not qualified in the airplane to carry passengers. He could get second in command time, but needed 3 takeoffs and landings.

In flight, he didn't have a particular job to do. Rick would explain the equipment to him, and let him use the radios on occasion to keep him busy. He did not put anything in the FMC[6] other than change frequencies. It wasn't a "job", just something Rick would let him do. He said this was a single pilot operation. Rick had been to school and was qualified as a single pilot, and sometimes would fly without a co-pilot.

He said Rick used the electronic checklist, and said it was "pretty thorough". He said Rick used it regularly. Rick would pull up the checklist, and he would look at it while it was being read.

He said there was a briefing on every flight, "but it consisted of different things." If the weather was to be bad, he would brief them about that and a possible diversion. He did not remember Rick "actually verbally say fasten your seatbelts" and use the switch in the cockpit with a chime. On landing, Rick would also just use the chime, and he didn't remember ever having said anything to the passengers. There was once, during a smooth flight, where a passenger came to the cockpit to ask about the flight, and Rick told him it might get bumpy and to go take a seat and fasten their belt. That was the only time he remembered Rick telling a passenger to use their seat belt.

When they got to John Tune, they landed at about 5:30am, disembark the passengers, and would go take a nap for about 3-4 hours. Rick would then work on his computer before they left for lunch. Rick would also take a 15-20 minute nap in the afternoon before the flight.

Rick also flew the airplane from John Tune to Thomson. There was nothing unusual about the flight. Sometimes ATC[7] would hold them up high coming into Thomson. Rick flew the "snow flake" that acted like a glideslope. He said Rick always tried to land on runway 10 since it was

[6] Flight Management Computer.
[7] Air traffic control.

up hill. That would help slow the airplane up. He did not know what the gradient on the runway was.

He said they left John Tune around 5-6 eastern time, and arrived into Thomson about 7 pm, and it was night conditions when they arrived. They had to turn on the runway lights by clicking it 7 times to bring the lights up. They typically landed with the runway lights down to low intensity. High intensity was a little "blinding". The Premier was the only plane he flew into Thomson, GA. He did not remember if the PAPI[8] lights were out or not. He remembered seeing the PAPI lights before, but he couldn't remember if the lights were working "properly" or not. He did not know if the PAPI lights were tied to a runway light intensity or not.

He said that he had flown with Rick when they landed on runway 28, and it was usually because of "stout" winds. He said he got the impression that anytime you landed in this airplane "you had your hands full." He only remembered landing on runway 28 2 or 3 times at the most. He did not remember what approach they shot to runway 28. For runways that did not have an ILS[9], they used the snow flake. For the ILS, it would be coupled to the ILS, and if they were in VFR conditions, he would follow the snow flake all the way to landing. They coupled the autopilot to the ILS.

He did not remember having any non-normal events, and did not ever do a go-around in the Premier. He said Rick always had it "on profile." They never did a balked landing. The thing that "got my attention" was the speed of the airplane. He was used to flying a King Air, and in the Premier, you would take off at 109-110 knots, and accelerate, and the rate of climb was something he wasn't used to. On landings, he felt Rick had to get on the brakes to get the plane stopped. He said it was a "faster machine" than what he was used to. Rick looked up the ref numbers prior to landing. On final, he would call out ref + 5 or 10 to help Rick. He did that on his own, and read the numbers off his airspeed after Rick programmed it on side and they would show up on his side as well.

He said Rick never had him handle the flap or gear levers. He asked Rick once about the flaps and what setting to use for landing, but he never touched the flaps, gear, or lift dump lever. He said he saw Rick use the lift dump lever according to the checklist when the checklist called for it. This was for when he armed the lift dumpers. He did not remember if Rick was physically manipulating a handle for the lift dump on landing, and since his attention was outside the airplane, and it was usually dark when they landed, he couldn't see Rick hand movement from the throttles to the handle, and "just don't remember" seeing if his hand was moving to the handle.

He said typically on landing at Thomson, which was 5500 feet long, flying the snow flake put them about 1000 feet down the runway. They always had it stopped and barely moving by the time they got to the end of the runway. He remembered one long landing in RDU[10] on a 9000 foot runway. They were on target and on speed, and Rick was trying to make a soft landing. That was by design, and didn't happen by accident.

[8] Precision approach path indicator.
[9] Instrument landing system.
[10] Raleigh-Durham International Airport.

He said his total time was about 15000 hours, and about 90% of that was PIC[11] time.

He said Thomson, June Tune and Raleigh were the only airports he flew into with Rick on the Premier. When they went to Raleigh, they would arrive at about 5:30 to 6:00 am, and the airport had a pilot lounge and a "snooze" room to sleep. Nobody was there except staff, and they would get about 3-4 hours of sleep, then take a nap in the afternoon before flying out.

He asked if Rick ever talked to him about SMS[12] or risk management, he said a couple of times going into John Tune, they would talk about what they were going to do for takeoff and at altitude, and where they would divert as necessary. He said they monitored the weather, and would say "the risk is too great" going into Tune, sometimes because of the river near the airport that would produce fog. Rick would sometimes say "it's not worth the risk" or something like that.

He said Rick was flying with the doctor about 3 times each week, and sometimes would take them on vacation. He said Rick was flying for the doctor "quite a bit." Rick never complained about the schedule, and told him he enjoyed what he was doing. He said Rick's FBO[13] "was his business," and "when he wasn't flying, he was here" at the FBO in Greenwood. Rick and Dr. Roth interacted "quite well", and he never saw the doctor put pressure on Rick, and thought they had a "pretty good" personal relationship. He said Rick was the final authority.

On the last flight he had with Rick on the Premier, there was nothing out of the ordinary. He said he once questioned Rick about a latch on a door he couldn't close, and Rick looked at it and reset it and it was fine. Anytime he walked around the airplane and saw something, he would tell Rick and he'd explain it to him.

Rick never said anything to him about any problems with the lift dump on the Premier.

During the times they flew together prior to the Premier, he did not remember encountering any abnormals when flying with Rick. They trained together and flew some non-normals, but no real emergencies.

He said that the times he flew with Rick on the Premier, he was always professional and ran a sterile cockpit. He was a professional and did a good job, and had good flying skills.

Interview concluded at 1412.

13.0 Interview: Scott Dickmeyer, FlightSafety International Premier Program Manager

Date: April 18, 2013
Location: Flight Safety Learning Center – Wichita, Kansas
Time: 0945 CDT

[11] Pilot in command.
[12] Safety Management Systems.
[13] Fixed Base Operator.

Present were: David Lawrence, Maryam Allahyar – NTSB; Peter Gracey, Beechcraft Corporation
Representative: Charles H. Smith, Smith & Moore PLLC

During the interview, Mr. Dickmeyer stated the following:

His name was Scott Donald Dickmeyer, and he was 51 years old. He was the Premier Program Manager at FlightSafety. He was responsible for coordinating all training for the Premier schools, both initial and recurrent; and the go between the scheduler and the instructor and instructor/student pairing, making sure everything went smoothly. The training program was done under the Parts 142, 135, and 61. He had been in that position for 7 years and had been employed at Flight Safety International (FSI) for 16 years. Prior to assuming his position as the Premier Program Manager, he was an instructor on the Premier and King Air 200s and Beech Jet dating back to 1996. Prior to his employment at FSI, he was on activity duty in the Air Force. He was typed on the Premier 390S, going through the program at Flight Safety around 2000 or 2001.

Currently, he flew "whenever" he could. The last time he flew the Premier was within the last year. Flying the Premier depended on the clients' need. His total flying hours were approximately 5500, with 4000 of which were as pilot in command. His total hours flying the Premier were about 100; however, he utilized the simulator whenever possible since it was mandatory to stay current. He flew the Premier simulator three times a year (3 days) which was mandatory for their currency. He also had the show and tell or demos with the clients about once every other month.

Flight Safety International (FSI) had ten instructors, including Mr. Dickmeyer being the direct supervisor for all the instructors. Flight Safety International also had one customer support representative who took phone calls with clients and set up the dates. Mr. Don Orlando was their director of training, and his supervisor Ms. Debbie Jones, who was the center manager. Mr. Dickmeyer's assistant was Mr. Cary Wangelin who handled things when Mr. Dickmeyer was out of the office. Mr. Dickmeyer also taught for currency and as necessary if instructors were on vacation or sick. He did not teach any other aircrafts besides the Premier.

He believed that FSI was the only contract training provider for the Premier. The initial program would begin by client contacting the FSI to set up the program with the customer support representative who took pilot certificate information and find time for the client to set up the 17 day course. Mr. Dickmeyer would then match up the client with an instructor and set up the schedule. The initial program always started on a Thursday at 8:00 a.m. Clients worked the first 6 days from 8:00 a.m. to 5:00 p.m. with Sundays off doing ground school. The following Wednesday which would be the end of the first week, a written test was administered to the clients. Passing this test was required prior to transitioning to simulator training. During the simulator training, for example, single pilot operator would receive 15 hours of pilot flying in the left seat. The 15 hours was divided into 2.5 hour per day in the simulator in addition to one hour of briefing prior to the start of simulator training and one hour of debriefing after the training for a total of 7 sessions. After the completion of the 7 sessions, there would be testing for type rating where an FAA examiner (from FSI) would administer the exam. The person teaching the

client could not administer the exam. On Thursdays, Fridays, and Mondays, they also added 2 hours of the Graphical Flight Simulation (GFS). The GFS was a computer based cockpit where they practiced "switchology," checklist procedure, and avionics instruction. It was all computer touchscreen with sound and updated FMS. Without practicing in the GFS, for example, clients on their first day would be wondering where the battery switch was. After the GFS time, when they were in the simulator, they would know. It made the simulator time much more valuable. The cost of the simulator was $1600.00 per hour. They did not want to waste the simulator time. They would give a total of 48 to 60 hours of ground school depending on the client, fifteen hours of left seat pilot flying in the simulator, plus all that GFS training hours. There were a "lot of hours" during the 17 days. FlightSafety was "not an easy program".

The simulator at FSI was level D training, having been upgraded to Vital 10 from Vital 8 for visual with Google Earth Imagery. It include 6 degrees of motion and hydraulic. It was certified by the FAA, renewing it next week as well as certified annually by EASA and most recently inspected by Thai as well. They had day and night visual and level D sound. During the initial training, they only conducted one session at night. That was to get a minimum of three night landings for night currency. Only FAR part 60 approved airports were used for visual and FSI in St. Louis coordinated those. They preferred to use airports that clients would normally use as long as it was part 60 approved. The visual used had to be the actual airport. If the airport that the client normally flew into was not part 60 approved, then they would find an alternate airport similar to it with respect to pressure altitude, runway length, etc. FSI had many airports in the database for simulation to meet the clients' needs.

Mr. Dickmeyer said he knew Rick Trammel and managed his training to pair him up with an instructor for simulator training. He was not certain if Rick Trammel had said anything about which airport he wanted to include in his simulator.

When asked about the benefits of LAHSO and that Rick Trammell's record did not contain a LAHSO training, Mr. Dickmeyer stated it was optional, and that most customers say they would not accept a LAHSO clearance. Some instructors made a comment on the records that the customer chose not to do the LAHSO clearance. FSI did not have any data reported from pilots who had had LAHSO training for a comparison to know its benefits.

Mr. Dickmeyer said that through marketing, FSI can set up "reduced cost" recurrent since Part 61.58 required the pilots to come back every year. Since they were the only training provider out there, most clients did sign up.

The most recurrent theme with respect to pilots' likes and dislikes was how much they loved the airplane and how the speed was "incredible"; however, they wanted to go further, meaning they wanted a longer range.

FSI offered many enrichment courses such as R-NAV which were trained by other instructors or specialists. Mr. Dickmeyer was not familiar with all the enrichment courses; however, he stated that there were a number of enrichment courses clients could do, some at the center, some online, and some "live learning" where they sign up on a computer at the center and the instructor would

do the live teaching from a different location. Of the enrichment courses, RVSM and High Altitude were the most popular.

Mr. Dickmeyer could not recall if Rick Trammel had a simulator partner. Typically, single pilots were not paired with anyone because they "need[ed]" to be single pilot. Some of the single pilots were on four or five hour simulator blocks together in a simulator. As long as they had done their 2.5 hours of left seat training, they could sit in the back of the cockpit and observe for the other 2.5 hours. There was no seat swapping when training single pilots. They could sit in the back of the simulator and observe or leave the simulator to go take a nap.

Mr. Dickmeyer said that Single Pilot CRM was Cockpit Resource Management in that the pilot used all the tools to operate the aircraft safely. It came down to proper decision making. Mr. Dickmeyer showed two posters which they had in all of their classrooms as well as their briefing rooms. He stressed that the focus of the single pilot CRM was on decision making wheel, handling emergencies, and SA. He gave an example of a hydraulic failure and how the decision wheel would tell the pilot to "maintain aircraft control", "fly the airplane". If there was a memory item, it would be an accelerated response, and the memory item would be implemented first. Once memory items were finished, they would go back to the decision wheel and based upon the facts, choose the appropriate checklist to use. For the single pilot, they would focus on his/her decision making. He stated that single pilot CRM came to good management of the FMS. If the pilot was not able to manage the FMS, they would not have good SA.

He indicated that Single Pilot CRM had been in place at FSI since he had been there. The CRM posters were available in the briefing rooms as well as the classrooms. FSI also handed out the CRM information on blue and gray cards.

Mr. Dickmeyer said that the stall training prior to the advisory circular consisted of three different approach to stall configurations: clean configuration with the autopilot left on, power back, and slowed down; takeoff/departure situations with flaps 10 in gear with 20 degree bank angle, no autopilot since they simulated a takeoff, recognize the stall, recover, and break the angle of attack; and last one being landing configuration-straight ahead simulated at minimum descent altitude, decision height, full flaps, gear down, power back, approach to stall from that point, cleaning the aircraft, with wings level-straight ahead. Recognition and proper recovery was somewhat subjective. The aircraft had to be brought back to flying "controlled" such as correcting the angle of attack with minimum loss of altitude. They did not practice deep stalls. They demonstrated stick shaker/pusher only at the time when Rick Trammel went through their training. That had significantly changed since the advisory circular was issued.

Go-arounds were taught constantly including: 1) Precision approach down to DA into weather, teaching them not to panic; 2) Sent around, rolling an aircraft in front of the pilot in the last seconds, doing the go-around with 50 feet; and 3) Anytime they were not meeting targets which were the unplanned ones. In response to whether they were taught as go-arounds or balked landings, Mr. Dickmeyer said that the 50 foot was considered the balked landing and the others were missed approaches. He said the checklist steps for go-around was the same as balked landing, plus it included adding power, raising the nose, cleaning up the aircraft, getting the NAV back in order. In his mind, he said balked landing was where you were doing it, with clear

weather at 50 feet and there was an airplane in front of you vs. instrument approach, coming in, not breaking out, an MDA, and going around. In both cases you would have to add power, raise the nose, and cleanup the airplane. He said he guessed that this was from the Beechcraft. He said there was no checklist "go-around" procedure and did not know why it was called balked landing vs. go-around. They would teach it the same way whether it was called a balked landing or a go-around. In a go-around, the nose had to be raised to 8 to 10 degrees pitch. This happened when the go-around button was pressed and the flight director would go to 8 to 10 degrees of pitch. Then it would be power plus pull to get the nose up because the center of gravity. Due to the location of the engines, they push the plane down. The power and "pickle" (referring to the go-around button) were done simultaneously and if he had to pick how much the nose pitch up would be, he would guess 8 degrees.

Mr. Dickmeyer said that the "pickle and push" technique was taught every time. However, pilot could climb without the flight director as long as they had SA and raised the nose. It was important to have pitch guidance. He said the question should be asked of Beechcraft why they did not have pitch guidance as part of balked landing procedures. He said that the FSI taught the getting away from runway. While conducting the go-around, there was no time to look at the checklist. It was taught through repetition. Balked landing checklist was put in by Beechcraft. At FSI they taught: add power, raise nose, cleanup the aircraft (flaps 10, landing gear up), and navigate. Total loss of airspeed was a red procedure and it would be towards the end of the pilot manual (page 3-38). Using the "pickle" was not taught for regular takeoff. If everything was loaded correctly, the go-around button sequenced the FMS to do the missed approach procedure. Pilots of King Air did it; however, it was not a technique they taught for takeoff in the Premier.

All Hawker Beechcraft pilots went through the training at FSI. If they found anything to be insufficient they would let FSI know about it. The checklist was a joint checklist even though it said Flight Safety on it. The checklists were all approved by the FAA. It was "the" checklist.

When asked if clients had any difficulties during training with balked landing, Mr. Dickmeyer said that they taught their pilots that a missed approach did not have to be a panic or an emergency procedure. They did not teach balked landing after touch down. Mr. Dickmeyer said that when this plane was on the ground, it stayed on the ground; when on the ground, assuming pilot was following procedures, the lift dump would be out and there was negative co-efficient on lift. Additionally, it took the engine 5 to 8 seconds to spool up. To go-around safely after a touchdown was not recommended. He said it was "dangerous" and it was "not a good idea".

He did not know if Rick Trammel had done actual training in the plane.

He said that the lift dump was on demand; negative coefficient on lift. Pilots had asked that there should be some sort of a trap to stop the lift dump from extending during flight. They were taught that it should not be done during flight like many things that are prohibited during flight. Lift dumps were for use on the ground only. It sealed that the pilot was on the ground and not going anywhere. The landing and lift dump out was trained in the simulator: Idle thrust- 50 feet, touchdown, lift dump out, brakes, all at the same time. They had to apply and maintain max brake. If the lift dumps failed, they would get a tone. At that point, pilot would have to go to the memory item: apply and maintain maximum braking. Lift dump failure resulted in increase in

landing distance by 53%. If the J-hook was not pulled out of the way, the lift dump would not deploy, it would be locked. Using the memory item, the pilot would then manually move the latch and use the lock release and the lift dump would be deployed. This was not required as a mandatory item on the syllabus for training. It was more of a recurrent item rather than initial. In the initial training, the focus was on flying the airplane.

Mr. Dickmeyer reiterated that pilot should not attempt to go-around after lift dump has been deployed. There did not appear to be any written guidance on this. It was taught during systems ground school when they discuss the flight controls and during performance discussion since it tied into landing distances. They also discussed it during simulator training. Without lift dump, everything was longer. They provided pictures of the lift dump system in the class and then they would discuss the information with the clients. He said that the antiskid was most effective in the last third of the braking. He did not know if Rick Trammell got the notes on landing distances since Mr. Dickmeyer was not the instructor for that ground school.

Mr. Dickmeyer did not recall any issues with Rick Trammell. He said that "no news was good news." He did not hear about students that often. Their students were already pilots, and they were just learning a new plane.

At FSI, they had FAA special emphasis areas such wake turbulence, TCAS, controlled flight into terrain training, etc. If, for example, they trained a TCAS then it would be a "T" for training and if they discuss the special emphasis area such as the LAHSO, then it would be a "D" (discussed).

He stated that they had not implemented any changes to the Premier other than the Advisory Circular prior to the accident and were still operating on "book two."

He did not know how frequently the lift dump failures had occurred. He said that he would tell his clients to fly this plane professionally and on speed. It was not a plane that could be flown based on "good enough". The Premier was not similar to a King Air that could land anywhere. He said the Premier "was not as forgiving."

Interview concluded at 1130.

14.0 Interview: Cary Wangelin, Flight Safety International Premier Assistant Program Manager

Date: April 18, 2013
Location: Flight Safety Learning Center – Wichita, Kansas
Time: 1315 CDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Peter Gracey, Beechcraft Corporation
Representative: Charles H. Smith, Smith & Moore PLLC

During the interview, Mr. Wangelin stated the following:

His name was Cary Norman Wangelin, and he was 51 years old. He was the Assistant Program Manager for the Premier program. His immediate superior was Scott Dickmeyer. He had been in

that position for 2 years. Prior to that, starting in 2006, he was an instructor for the Premier. He had been with Flight Safety International (FSI) since 1996. He began in the C-90 program, worked through as an assistant program manager in the C-90 program. He took 6 months off during that time and worked for Lear Jet in Dallas. He returned to Wichita, working for the Hawker Beech center, on the 350 program as an instructor for a couple of years. After that he worked on the Beech Jet for another two or three years; however, he returned back to the 350 program because they were shorthanded. He was typed on the Premier 390S. He received his type rating on the Premier in 2006.

Prior to him taking the position of Assistant Program Manager, Tim Lazar was in that position. Prior to Tim Lazar, Brain Moore was the Assistant Program Manager for the Premier. Tim Lazar was a SME (Subject Matter Expert) and did computer work. He was tasked with course work development leading to his time being divided.

He was responsible mostly responsible for doing paperwork, and reviewing/processing records and getting them out to the clients. The only time he supervised the other instructors was when Scott Dickmeyer was out or on vacation. He actively instructed in the Premier often. He taught the initial ground schools including the avionics. He also taught the initial and recurring simulator trainings. He was also a TCE (Training Center Examiner) for the Premier since 2007. His other type ratings included BE400, ME300, and BE350. He had an ATP and held a second class medical with "glasses" as the only limitation.

He occasionally flew the Premier when he provided pilot services for individuals who needed co-pilots for either 390 or 390S who flew as a crew for insurance purposes. It was not unusual for them to see 390S pilots with a co-pilot for insurance purposes. They have their co-pilots who were sent through training. Sometimes there were two pilots that were sent together, even though they were type rated on the 390S. For the Part 61.58 check, they verified that the pilots were able to do the items for the 61.58 as a single pilot. If they brought their own pilot with them and operated as a crew, they would also operate them as a crew at the FSI as well. That way, the two functions could be combined by implementing the CRM and pilot incapacitation, giving the pilot an opportunity to do single pilot flying. This was typically done in the recurrent. For the initial, they would go through the 390S training with the 15 hours of simulator.
When doing Single Pilot, there was Cockpit Resource Management (CRM) where they taught the pilots to use all of the available resources inside the simulator, people on the ground, ATC, etc. As for communicating with the person in the right seat, in the initial they did not cover too much. In all the ground school and avionics classes, he would cover some CRM including some crew interaction; however, it was mainly single pilot. They had to be a rated pilot on the plane or they would not be put in the simulator in the right seat.

Mr. Wangelin said that he did not know Rick Trammel personally but was his ground school instructor for the entire curriculum.

He thought the training provided on the Premier at FSI was excellent. They provided the training to bring pilots to proficiency for all of their checks, SRA390, RA390, and typed rated operations and actions. The facilities were "awesome" and "cutting edge", with good

presentation material. The simulator was level D and certified by FAA and EASA with day and night visuals.

There was a full lesson dedicated to night operation. If there was a need for additional night operation, they would provide that; however, it was not required on their syllabus.

He could not recall the advisory circular related to the R-NAV training which was in Rick Trammel's file. He also was not familiar with the Operated Recommended Levels of Automation. He was not responsible for teaching those classes. He mainly taught the RA390 Systems and RA390 Avionics. The specialty instructors conducted the specialty courses.

He remembered Rick Trammel as a student to be quiet. Rick Trammel sat up front, asked questions, responded to the questions that were asked of him, however, did not join in if questions were not directed at him. He vaguely remembered the course to have half a dozen students and not being at its maximum capacity. He could not recall Rick Trammel's interaction with others. Rick Trammel's performance did not stand out to Mr. Wangelin since he passed his ground school. They never talked outside of the training environment. Rick Trammel did not seem to express any concern about any areas that he could recall.

He did conduct CRM courses but not as extensive as the ancillary courses offered at FSI. Their CRM was the "Cockpit Resource Management". They taught the pilots that there were more than themselves in the cockpit and that they could use the radios and ask for aid. Also, automation, workload, and task management were emphasized. He taught his students to pay attention to targets and to manage the plane and workload by constantly working until at the approach checklist, holding flaps 10. That would be the only way to be caught up with the plane initially. Some pilots come in with other crew experience and they need to teach them that the same pilot is responsible for all the tasks in a single pilot. This could be challenging at times for those with two crew experience. Stall training was taught at the FSI.

Pre Advisory Circular, they taught 3 eminent stalls. They demonstrated a stick pusher. The three stalls they taught were the takeoff configuration stall, en route configuration stall, and the landing configuration stall. In each of these cases, they taught the pilots to take the plane to the stick shaker, reduce the angle of attack and increase thrust simultaneously, and come up back to altitude. Minimum amount of altitude change was taught prior to the advisory circular; however, the parameters would be subjective.

They taught the role of lift dump in the initial course. They had a flight control module where they discussed the lift dump system. It was a hydraulic operated system which operated through a "T" handle in the back of the center pedestal. It had a lock on it which had to be unlocked to activate it. The "T" handle had to be pulled up and moved rearward to deploy the lift dump. To stow it, you would have to bring it back up to the stowed position. There was a warning on it indicating "Do Not Deploy in Flight". The lift dump system was active every time it was unlocked or cable of being deployed every time it was unlocked. Before he got into the program, they had the speed brake switch next to thrust lever. If the weight on wheels were active, it would deploy the lift dump system; whereas if the weight on wheels were not active, it would only deploy the speed brakes. If there were any issues with the weight on wheels switches, then

the lift dump may not have worked. Consequently, they changed the design to retrofit the "T" handle system. The lift dump was important because it affected landing distance. If the handle did not work, there was a spring loaded release switch, immediately to the right of the "T" handle, which could be operated with the index finger to allow the lock to come free. This was taught in ground school because it was a memory item for the lift dump operation. It was part of the standard and must have been taught when Rick Trammel went through the course.

The lift dump system was also taught in the simulator on every flight, as part of going through the master rotary test. It was also part of the rejected takeoff procedure. It had to be locked as part of the after takeoff checklist and unlock it as part of the before landing checklist. They lift dump had to be deployed in landing after touch down. A simulated failure of the lift dump was not required to be taught in the simulator. That depended on the instructor and it was not part of the curriculum like the hydraulic failure.

Various go-arounds and missed approaches were taught in the simulator. Low energy go-arounds/balked landings which were typically from 50 feet were also taught. The procedures for a go-around consisted of go-around button, thrust, pitch, flaps up to 10, positive climb, and gear up, VMC, flaps 0. This was procedural and found in the checklist in the AFM, under normal procedures for Balked Landing. Balked landings and go-arounds were the same and had the same procedures. Balked landing was not taught after touchdown because the order of things that took place would result in too much loss of energy for a go-around. He had not run across any manuals that prohibited the pilot from performing a go-around after touchdown.

He stated that the normal procedures for balked landing did not include the "go-around" button because "not all approaches were done with the flight directors on." You did not have to fly with the flight directors on. Once the go-around button was pressed, it gave a 10 degrees pitch up reference with wings level. This did provide pitch guidance for the pilot. For a landing configuration stall series they did not use the go-around button as a clean-up technique. That was where they introduced the engine, pitch, with thrust increase. The go-around button gave pitch guidance but did not give any lateral guidance. Consequently, they taught all of their clients to do the same thing and that was heading mode or NAV mode (if R-NAV departure procedure), then pitch 10 because the 10 degree pitch would give about V2 if an engine was lost. It was better to be in an actual lateral mode for takeoff instead of a go-around. Go-around button only gave wings level. The go-around button did three things: 1) pitch command bars up; 2) disconnect autopilot; and 3) sequence the FMS for missed approach. You still had to go to lateral mode to get the flight directors to follow.

In his experience the area students had difficulty with was the avionics system in ground school. Similarly in the simulator, students usually had difficulty with the avionics as well as task saturation. They had something called the "safety window" or "window of risk" which was an area around the airport that was five miles from the surface to 2000 feet. Majority of the accidents took place around that area where only about 8% of flight time occurred in that area. Task management was really important for both departure and arrival. Outside of that window of risk, there was a five mile buffer which they called the "awareness zone" where if pilot was not done with the checklist to an appropriate point, which he said was flaps 10, then the pilot would have to consider how to handle the airplane's energy.

The electronic checklist was a tool that was available to the pilot. In the initial curriculum; especially with the single pilot operator, they highly recommended the use of electronic checklist. They introduced the electronic checklist to them in the initial curriculum and got them accustomed to using it; however, if the pilot in command was more comfortable with paper or plastic checklist, that was their choice. The electronic checklist was brought up with a button on the yoke and selected with another button on the yoke. As pilot selected each item, it marked items off, keeping track of where they were at all times. They were more diligent with the pilots who preferred the paper checklist, teaching them to use their thumb to keep track. The paper checklist was required to be on the plane.

The FSI syllabi were approved documents and typically they had a standardized type rating course template that went through out flight safety for all the type rated airplanes. Then, each template was modified for aircraft specific items which was "typically a SME and then Scott Dickymeyer normally had his hands all over that after the SME was done" to verify the items that were in it. He thought they may have been developed in Texas.

He stated that the "snow flake" was the same as V-NAV. It came from the earlier version of the automation.

During the initial course, the task saturation (managing the avionics and the plane) issue was trained out. They made sure their clients were up to speed. However, there was still some task saturation. Students were more confident in their recurrent than in the initial since they had had six months to interact with the system.

He said that his total flying hours were about 6000 hours with 5500 as PIC and 15-20 hours of flight time in the Premier.

Mr. Wangelin had never seen any students attempt to takeoff after landing with the lift dumpers deployed.

In the stabilized approach, they taught the student to look for certain targets throughout the approach segment. Their profiles had to be 170 knots, below flaps speed, and five miles for the awareness barrier. The awareness barrier would be five miles from the outer marker, with flaps set to 10, constant power setting, slowing, and decelerating with flaps, to about 140 knots. If on an ILS, then you would put the landing gear down, intercept glide slope, put flaps all the way down, slowing to ref and 10, on glide slope, half a mile from the end of the runway, on speed at VREF at 50 feet. The altitude for thrust to be brought to idle would be 50 feet which would be the window for landing. A wind vector was located on the lower left hand corner of the ADI, above the data block for the active NAV sources. The single dynamic wind vector turned off "at some point in time"; however, he could not recall the exact time. The single dynamic wind vector showed the speed, with a tail limitation of 10 knots on the Premier. The tailwind component was visually indicated below the airspeed indicator. This was brought to students' attention when they discussed the avionics system.

Generally, for the FAA class, he used Part 60 approved airports in the simulator. There was a list of airports which had passed the "smell test" for the visual scenes. Every instructor could have a list of airports they liked to use. If the airport students used was not Part 60 approved and in the FSI's data base, they would use an airport that was similar in light, runway length, temperature conditions, etc. to the one the student was used to.

For risk assessment, they discussed go/no-go decisions with single pilot students based on physical needs as a briefing or debriefing item that in a high workload environment, they may want to another type rated pilot with them. Fatigue management or fatigue training depended on what time the simulator training was. If the simulator training was at midnight for international students, they would teach them to manage fatigue while they were at FSI. In particular, in a single pilot flying, they reiterated to the students that they needed to be able to say "no" to a flight. There was no specific module on fatigue training; however, there were some items they integrated throughout the course and in CRM training. They taught the students to recognize the items in the error circle on their training poster.

Interview concluded at 1445.

15.0 Interview: Scott Davis, FlightSafety Premier Instructor (retired)
Date: April 19, 2013
Location: Flight Safety Learning Center – Wichita, Kansas
Time: 0915 CDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Peter Gracey, Beechcraft Corporation
Representative: Charles H. Smith, Smith & Moore PLLC

During the interview, Mr. Davis stated the following:

His name was Noble Scott Davis, he was 66 years old and was retired. He retired from FSI on August 31, 2012, and he previously a Premier 390 ground and simulator instructor, and also a training center evaluator (TCE). Prior to the Premier, he was on the King Air 300/350 and Beechjet as an instructor. He became a ground instructor on the King Air 200 in February of 1992, then a simulator instructor, and then went to the King Air 300/350 in about 1995. In 1999 he started on the Beechjet until 2001, and then he went to the Premier until his retirement. He became a TCE on the Premier about a year after he was typed on the airplane. He held a 390S type rating. He held an ATP with 390S type ratings, and King Air BE300, BE400, and MU300 type ratings. He did not have a medical certificate that was valid in June 2012.

He estimated that his total flying time was about 3400 hours, with about 2000 hours as PIC. He said he had about less than 20 hours in the actual Premier 390.

He said he was Rick Trammell's TCE for his oral and type rating. He said rick got his type rating in June of 2012, and had not met rick prior to the check ride. He did not recall the specific check ride other than it was a satisfactory check. He had reviewed ricks training files prior to the interview to see if he could recall anything specific about the check ride.

He said he had administered about 25-30 type ratings per year on the Premier. He said he had administered busts on type ratings before, but could not remember an exact number. He did not recall the last bust he gave. There were 5 total TCEs on the Premier and FSI in Wichita.

When he evaluated applicants for a type rating, he would use the ATP practical test standards. He would administer an oral evaluation for the type rating, and he administered an oral evaluation to Rick Trammell. He did not recall anything about the oral other than it was satisfactory.

He said when he administered an oral, he would meet the client, get his license and medical certificates, and then give an overview of the check ride. He would then give them a performance and weight and balance problem that was not on a computer, and they would have to use the AFM for specific problems, determine the V speeds, and determine the maximum takeoff weight. They would also have to complete a landing weight problem, and he would then begin to ask questions regarding the limitations, including where they would get their landing distance figures from. This was found in the AFM and abbreviated checklist. He would then ask them about all the emergency procedure memory items, followed by limitations. After that, he would conduct a general systems review, using a poster, asking "what would this switch do." He would use the poster to get their knowledge of the systems. He said he would have the ATP standards in front of him to ensure they covered all the required items. The oral would last about 2 ½ hours. He said he had never had a student not make it past the oral portion of the check ride.

He would review the students training records while the student was doing the weight and balance problem to make sure all the required items were complete. After the oral, they would take a break then go to the briefing room to start the practical portion of the exam. They would review the walk around video and he would ask questions as they went through it. He would advise the student to treat the check ride as a normal flight, and he would review the practical standards for the ATP.

When they got in the simulator, the student would get the weather and ATIS, just like a real flight. He would watch for their procedures and expanded procedures, and he would put in various malfunctions during the preflight to see is the student would catch it. He also would give start malfunctions. He would follow along in his checklist as well. The student would use a paper checklist up until they got the avionics running, and then use the electronic checklist.

When the client would use the checklist, they would verbalize each item. He would also follow up to ensure the action was complete. There was no one in the right seat for the type ride for the single pilot rating rides. During the rides, he would issue certain non-normal items. He would insert an item to get the client to initiate a rejected takeoff. They would conduct an instrument takeoff, and break out of the clouds at about 500 feet, then put in a TCAS event without an RA to watch their reaction. He would a clearance to a radial to intercept. Typically the malfunction he would give would be like a generator failure, battery tie open failure, etc. when they were at altitude. When they got one of these non-normal events, he was looking for situational awareness to see if they recognized the problem, correct checklist use, communication with ATC, automation management, and proper use of the procedures. He's evaluating them on their use of all their resources both in and out of the cockpit. For situational awareness, he would

evaluate them if they were monitoring the weather, systems, weather, and ATC. He would look to see if they were staying ahead of the aircraft and setting targets.

Students have CRM incorporated in their curriculum. CRM for a single pilot would entail "cockpit" resource management. He would check to see if they were staying ahead of the aircraft. He also looked a decision making in a timely manner, and listen to their briefings. He also looked at their automation management, and if they recognized a failure of a system.

For single pilot CRM, they used a blue and grey card. The card topics were also on posters in the classroom, and the clients given the cards in ground school. He said he liked the crew performance standards. The card said crew resource management, but the topics applied to a single pilot operation. He did not know the origin of the information on the blue/grey card.

He said he evaluated a takeoff briefing and approach briefing with the information the pilot verbalized to him, and the items he needed to plan. He said the client was trained to verbalize a briefing. He said he wanted to hear the briefing every time, and most instructors would train the students to verbalize their actions. There is no specific written guidance that tells the student to verbalize a briefing.

He said that typically, the pilots that came to the Premier were a mixed background, some with and some without previous jet experience. Most of the pilots were Part 91 pilots, but he wasn't sure what the percentage was.

The instructors would meet yearly for a TCE meeting with the local FSDO, and a wide range of things were discussed. They had tests, and would discuss things like subject matter, FAA regulations, systems, teaching, and records. At least 4 times each year, the groups would get together for training, and the program manager would also get the instructors together, and this would include all instructors on all fleets. They would then have individual fleet breakout sessions. He said it would not be abnormal to have a guest speaker, and that could include FAA personnel. The local FAA representative would come over as well. The test pilots from Beech, like Joe Rubiak, would also come over. Sometimes Hawker Beech would have a safety meeting that they would invite FlightSafety instructors to. He did not attend any of those. There was an incident a while back that the pilots from Hawker Beech came over to the simulator to review and try and duplicate.

He was familiar with the lift dump system, and the purpose of the system was to get as much weight on the wheels to make the braking effective since the airplane did not have reverse thrust, and was designed to allow the anti-skid system working. The anti-skid system was "very important". If you lost the anti-skid system, the penalty was similar to loss of the hydraulics. It was about a 130% penalty with flaps up over your landing distance for a normal dry runway, and about an 89% landing penalty with flaps 10.

There were warnings to the pilot for malfunctions of the lift dump system. The checklist said that the pilot must make sure, prior to landing, and that the lift dump handle was illuminated and the J hook was unlocked. There was also an aural tone when the lift dump system did not deploy, and the memory item was to apply and maintain maximum braking.

He said a balked landing was a discontinuation of a landing. For example, he would clear a client to land, and when they broke out of the clouds, he would place a vehicle on the runway that would require a go-around. The procedure would be to push the go-around button and advance the thrust levers. The go-around button would guide the flight directors to ten degrees pitch and turn the auto-pilot off, which shouldn't be on anyway at that point. The pilot would then advance the thrust levers, and they would then pitch up for Vref. At positive rate, they would go to flaps 10, then gear up, then flaps up. The guidance for that was found in the AFM procedures. Go-arounds were also taught in the Premier, and "essentially were the same." On an ILS, and DH, the pilot would be executing a missed approach. The procedure the pilot would apply would be a go-around procedure, which was the same as the balked landing.

There was no procedure to execute a balked landing or go-around after touchdown on the runway. It was not trained at FlightSafety, and "when you land, you land," and "you just don't do that." He had never seen a student try that.

He said the most common areas of difficulty students had was managing and programming the FMS. He also said they had problems with missed approach procedures in making sure the configuration of the airplane was correct. After the airplane was cleaned up, they used an acronym called SNAP for go-arounds. The S was to select the navigation source to FMS, the N was for flight guidance for navigation, the A for the missed approach altitude which should already be set in, and the P was for the auto-pilot when the airplane was in trim and under control. There was a card that FlightSafety had that the students would use in training.

He said that they would teach students not to do go-arounds after landing in flight controls during ground school, and also in the simulation training. There was no time to re-configure the airplane, and the airplane would likely be out of trim and the flaps would be down. He said the airplane "just would not fly." It was not a part of the profile, and simply not taught. Also, the engines would be spooled down to idle. Advancing the thrust would take about a 6 second spool up time. He wasn't sure how often it was discussed in training, but it was discussed throughout the training.

He said some people would not get recommended for the check ride after training. An instructor would never recommend a client for a check ride unless he was sure the client was proficient.

He said FlightSafety tracked substandard events on the Premier, but he did not know if that figure was shared with the TCEs.

Interview concluded at 1030.

16.0 Interview: Craig Rudy, FlightSafety Premier Instructor
Date: April 19, 2013
Location: Flight Safety Learning Center – Wichita, Kansas
Time: 1405 CDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Peter Gracey, Beechcraft Corporation

Representative: Charles H. Smith, Smith & Moore PLLC

During the interview, Mr. Rudy stated the following:

His name was Craig Lyndon Rudy, and he was 47 years old. His title was Premier instructor for FlightSafety. He had been an instructor on the Premier since 2002, with one taken off. He previously was the Beech Starship Program manager, the BE1900 and BE2000. Prior to that he held various flying jobs before initially being hired at FlightSafety in July 1999. He estimated his total time as about 5000 hours, and about 3000 hours PIC. In the actual Premier, he estimated he had about 20-25 hours. He got that time for a Part 91 operator out of Minneapolis, and the rest for the Premier time was "ride alongs" with Beechcraft.

He was Rick Trammels' initial instructor in the simulator, and occurred last year. He had not reviewed his training records, but remembered who he was. He had trained many pilots since that time. He was also a TCE on the Premier, and got his certification just over 4 years ago. He said a majority of the check rides he gave were not for type ratings but for Part 61.58 check rides. He could not remember the total number of type ratings he gave, but generally he guessed he would give about 3 per month, and he did about 4 per week for the Part 61.58 checks. He said he had busted pilots on the type ratings, but could not recall a number other than "it was extremely rare." The Part 61.58 was a proficiency check that you could train to proficiency to pass the check. That would occur "very seldomly."

For recurrent training, he said that the checklist had to be completed every time, whether it was the paper checklist because the generators were not operating, or the electronic checklist. To do the entire checklist, it would take a full 20 minutes to complete.

He did not recall how Rick Trammell performed in the simulator, but remembered he had jet experience and multiple type ratings, so he had experience in level D simulators.

Mr. Rudy was shown a copy of Rick Trammell's training record. He said the "2's" on the record meant normal progression, and the "1's" meant up to standard. He said Rick's training progression was typical for someone with previous jet experience. There should be no "2's" on the last line prior to the check ride. More than 2 "2's" would be "an eye-opener." His advanced instrument procedures were normal. The ab-normals would occur after the normal were shown, and his progression was normal. His two engine go-arounds looked normal. His missed approaches procedures took a little more training but that was considered normal. He grasped all the items normally, including the decision to go-around normally. His systems knowledge looked good, with a little bit of extra help with the electronics. He came out of ground school in good shape, with a little bit of extra emphasis on the EFIS systems. His emergency procedures were found fine and adequate. The "T's" meant they were items that were either trained or discussed. He had 12 days and 12 night takeoff, and 12 day and 8 night landings. He had no idea why that was different and said "maybe someone has audited these records." He said Rick consistently met or exceeded ATP standards. His records showed he had previous jet experience, and his CRM skills were considered "fine." He noted that Rick did not have anyone sitting in the right seat during the training. He said that FlightSafety did not encourage LAHSO

on the Premier since it did not have thrust reversers, and that was noted on Rick's training record.

He said the SRM in the record was for single-pilot CRM. The guidelines they used pertained to the knowledge of the pilot-support avionics like the EFIS, FMS and TCAS. He did not know specifically if there was FAA guidance on single pilot resource management, but thought it was in the AIM. When asked how he would evaluate a pilot on SRM, he said "does he know the limitations, and is he able to employ the auto-flight system, does he understand how to couple an approach, does he understand how to fly the auto-pilot during normal flight or abnormal flight." The pilot should be able to use other outside sources like weather or ATC and flight planning services, but without understanding the automation "you weren't going to pass the check ride." He said he got his information about how to teach SRM from Embry Riddle, but they did not have a specific course on SRM at FlightSafety. CRM was incorporated as a supplement to their training. When shown the training cards used by FlightSafety, he was asked where it showed "SRM" and said it wasn't on there, but SRM had the same elements as CRM. He said the definition of CRM was crew resource management, which could be "morphed" into cockpit resource management, which could also be "morphed" into single pilot resource management. FlightSafety followed industry guidance for all resource management. He said CRM wasn't really different if you were flying with someone or flying single pilot with regards to how you talked on a radio or responded to a TCAS.

He said the lift dump system aided putting weight on the wheels to maximize brake efficiency. The lift dump system was critical on the Premier to stopping, but was not the main stopping item. It assisted the stopping by use of the brakes, which was the primary stopping device on the Premier. The failure of the lift dump system was available in the simulator, and it was not a particular item in the syllabus, and was at the instructor's discretion to show the student. Anti-skid failures were the same, and not required, although he said he would show those to the student in the simulator.

He said the Premier was "pretty fast" and the student would have to understand speed management, and students with previous jet experience would be able to understand that. There was a pre-course study guide for jet training for those pilots that did not have previous jet experience. It was an online course that could be downloaded, and was expected to be completed before coming to FlightSafety. That pre-course study was not facilitated by an instructor, but there was a quiz at the end of the course. When the student came to training, they filled out a qualifications page. He said the students had to pass the ground school prior to entering the simulator phase. He said some students may have difficulty transitioning from a piston to a jet. For the students who were weaker on jet knowledge, he did not have additional tools to assist them, but he would be amazed if the student had any difficulty understanding jet flying coming out of the ground school. He said the people he had seen needed less work with flying skills and more work with the avionics. He said the avionics were "fairly complex." The Premier does not fly any harder than any other airplane. More emphasis was placed in understanding the Proline 21 system than how to execute a steep banked turn.

He said they do not teach touch and go's in the simulators, and he had never done one in the airplane since "it doesn't sound realistic to me." There was nothing in the training guidance on

touch and go's and "that just sounds dangerous to me." There was no procedure for a go-around after landing. Everyone in the program taught that once you touch down, "you are committed." There was no decision to be made after touching down and the lift dump is deployed.

He said a go-around was an aborted landing. They emphasized stabilized approach. For a go-around, the pilot would "power, pickle then pitch." He said there was a spool up time for the engines on a go-around. The go-around procedure called for flaps 10, positive rate of climb gear up, above 130 knots flaps up. If you went to gear up before the flaps were up to 10 you'd get a takeoff warning horn. The go-around button was the first thing the pilot wound hit on a go-around. He said there was a difference between being fully configured and partially configured for a go-around procedure.

When asked what the go-around procedure was, he referred to the manual for the balked landing procedure. The procedure was called a balked landing, and the procedure for a balked landing and a go-around were the same. The procedure did not call for the "pickle" or go-around button to be pressed. He said pitch guidance was beneficial for the pilot in getting the airplane climbing. He said, in his opinion, when asked if the go-around button should be in the checklist for balked landing, he said "I don't see why not."

When asked if he had ever seen a student attempt to go-around after landing, he said he had seen a student begin to try it and he stopped the simulator. He stopped and told the student not to do that. He doesn't understand where a student would get the idea to attempt to go-around after landing. He said that they teach that once you are on the runway, you are committed to staying on the ground. If you are going to miss, you must miss before touching down.

He said they had handouts from the company that emphasized speeds, and there was guidance on the effects of increased speeds on landing speeds. You had to meet certain targets while on the approach, and if you did not meet that targets you should go-around.

He said that instructors at FSI sat through a ground school annually, which was a 3 day course. He said he did not know of anyone who taught a student to do a go-around after landing, and he thought he had heard never to attempt that during his own initial and recurrent training.

Interview concluded at 1507.

17.0 Interview: Jeremy Bruce Hayden, Executive Shuttle Pilot
Date: June 17, 2013
Location: NTSB Offices
Time: 1225 EDT
Present were: David Lawrence, Maryam Allahyar, Peter Wentz – National Transportation Safety Board (NTSB); Mark Mohler – Beechcraft Corporation (via phone)

Mr. Hayden was represented by his counsel Mr. J. Arthur Mozley.

During the interview, Mr. Hayden stated the following:

When asked if there was anything different regarding Rick's behavior or demeanor on the day of the accident from what he had seen on previous flights, he said there was nothing significant, and nothing "jumped out." He said in his opinion, Rick looked rested on the flight to Thomson.

He said that when Rick provided training to him on the Premier, it consisted of 3 takeoffs and landing, with one landing with a simulated single engine. There was also a systems review, which was on-going through all the flights they flew together. There was no formal structure or syllabus to the training, and it usually consisted of asking questions about certain systems and looking it up in the book. This was his first jet experience. He said the training was a continuous process, and could be considered on the job training. He never conducted a go-around in the airplane, either during a regular flight or one of the training flights. He said at this time he could not remember if he had ever seen Rick do a go around in the Premier. He said he had never seen Rick do a touch and go in the Premier. He did remember seeing Rick look at an approach and discontinue it and fly a pattern back to the runway. He did not remember Rick giving him training on a go around, and did not remember receiving go around training from Rick on the Premier.

He said his primary job for Rick was flying the King Air, and only flew the Premier with Rick when he asked him. The go around procedure for the King Air was full forward on the throttles and props, 1310 on the torque, flaps to approach, gear up, and then begin the cleanup. The King Air did not have any lift dump system.

He said he had never had an annunciator light come on in the Premier that required him to go into the written checklist. He said he did not recall ever seeing any annunciator lights come on during his flying on the Premier.

He said he did not remember the go around procedure Rick executed after touching down on the runway in Thomson. He did not recall any interruptions in his sleep in Nashville. He did not remember his sleep being particularly good or bad.

He estimated that he may have flown into Thomson maybe 15-20 times. He said nothing particularly jumped out at him about problems with the airport lighting. He did not specifically remember seeing the PAPI on the night of the accident, but remember seeing it in the past. He did not remember if there was a NOTAM on the PAPI system or not. He said all of their flights arrived into Thomson a night. They would start with the runway lights on full to find the airport, and then bring the lights down to medium or low for the landing.

He did not recall who briefed the passengers on the accident leg. Typically Rick was the one who would brief the passengers since they were all familiar with each other. He said he did not particularly pay attention when Rick was briefing the passengers and it was not something he would do. He said on a bad weather day, Rick would tell them to keep an eye on the seat belt sign. A majority of the time they were flying the same passengers.

When they used the seat belt sign, they usually only hit the sign and didn't brief the passengers unless it was going to be bumpy. He never looked back to see if the passengers had their seat belts on. He had flown Dr. Roth on other smaller aircraft charter flights, and he had never seen

Dr. Roth not using his seat belt. Dr. Roth was usually sitting on the aft right forward facing seat most of the time on the Premier.

He said he did not have any memory of any discussion regarding the approach not being stable. He said there was nothing that he remembered that seemed unusual for the operation into Thomson that would have required a go around.

Regarding the speeds he called during the go around, he said the speed he used to call rotation was a speed above the V1 speed but below the rotation speed for the departure from John Tune. Given the end of the runway coming up as quickly as it did, it was his impression that they were above the V1 speed but below rotation speed for the Tune departure, and given the fuel that they had burned off flying from John Tune to Thomson, it should have been adequate. Even if it wasn't adequate, "we didn't have a whole lot of options at that point" given that they had rotated less than 1000 feet from the end of the runway.

He said that in the past, he and Rick had discussed the discrepancy between the ILS and the VNAV path, but did not remember it being a large difference. He did not remember seeing that on the accident flight.

He did not remember looking around to the passengers to see if they had their seat belts fastened on the accident flight.

On approach, he said his expectations were to not touch the flight controls "unless it was specifically annunciated." He said "when Rick was flying the airplane, he was flying the airplane." As far as callouts, typically he would call out gear indication lights, flap position, and Vref speeds. There weren't specific callouts, and the process was "organic," and when the time came for a callout, he would call it out. As far as the radios, he would ask Rick how he wanted the lights set, and would also handle ATC communications where appropriate. He said these were the kind of things he and Rick worked out over time flying together. When they flew together in the King Air or the Baron, they used the same process.

He said he said he had a total of 3 or 4 hours of "required two pilot operations" experience, and that was when the autopilot was out on the Premier. He said most all of his experience in Part 135 operations was single pilot. He said before he started flying Part 135, he did have about 160-170 hours of flying with other pilots. He said that Rick had briefed him early on, even before the Premier, that if he saw something of concern to bring it to his attention.

Interview concluded at 1254.

18.0 Interview: Richard Zachary Trammell, Chief Pilot, Director of Operations, Owner – Executive Shuttle

Date: June 17, 2013
Location: NTSB Offices
Time: 1110 EDT
Present were: David Lawrence, Maryam Allahyar, Peter Wentz – National Transportation Safety Board (NTSB); Mark Mohler – Beechcraft Corporation (via phone)

Mr. Trammell was represented by his counsel Mr. J. Arthur Mozley.

During the interview, Mr. Trammell stated the following:

When he was asked to explain his previous comment that the Wednesday of the accident was a "tough day," he said that there weren't any weather issues, it was "real early" but the good thing was that the days before it were "easy," with the Monday before being a late day, and the day before was late. On the day of the accident, it was "tough" since it was an early departure than normal. He took an hour to get down to the airport, and 30 minutes to prep, including moving the airplane out of the hanger. The 0430 departure was what made it tough. There was nothing special about the day like weather or bumps.

Regarding his giving Jeremy a 61.55 SIC check, he said "no one was required to be in that seat." If Jeremy wanted to log time in the Premier as second in command he needed the 61.55 check. There were 3 other people he used to help with the airplane like during fueling and pulling the airplane out. Another help was to get clearances since it took time to get clearances from Thomson, and it helped during a high workload time for him.

He said they were going to get Jeremy an SIC type rating for the airplane since there were places like Bermuda that wanted to see an SIC type for the co-pilot. The FAA just started issuing SIC type ratings for flying into foreign countries. He said they got Jeremy the 61.55 check for the ferry legs, and he had signed him off. The other two pilots who had flown with him he didn't even allow to use the radios, and they were primarily there to help pull the airplane out or help with fueling. He thought that the Premier was Jeremy's only jet time.

He said they selected a 5 mile final in the FMS, and Jeremy had the ILS tuned to his side. He said the PAPI was "messed up" because it would only come on when the runway lights were on high intensity, which was too bright to land with. He used the "snow flake" for vertical guidance to the runway, and Jeremy was using the real glide slope from the ILS.

He said that he did not have a specific memory of receiving training on the anti-skid system, but thought it was part of the course. He said when flying the airplane, he never felt the anti-skid system come on, and he said he had hardly ever used the brakes enough to use anti-skid since he had never felt them actuate. He had flown airplanes in the past that had anti-skid systems like the B737, Sabre liner, CJ Citation 5. He said in the CJ Citation he had done it to try the system to see what it felt like. He said in training they talked about what would activate the anti-skid system, like what speeds it would cut off, and how they would apply the brakes during gear retraction. He remembered different landings in training that required hydraulic failures that had the anti-skid inoperative. He remembered the Delaware recurrent training performing a lift dump failure on landing on an 8000 foot runway. They also had a double hydraulic failure for landing that didn't have anti-skid since you had to use the hand brake to stop.

He did not specifically remember receiving an anti-skid light and conducting required procedures for that light while in training at FlightSafety. He said he did not recall if there was a procedure in the checklist specifically addressing an anti-skid failure. He said he did have training on

system failures that required the use of the checklist. You would begin with any memory items for the failure first, and then go to the checklist. He did not remember if the anti-skid system had a memory items associated with it.

When asked if there was any landing performance penalty associated with an anti-skid failure, he said "for a maximum performance landing of course there would be, but for normal landings I never felt the anti-skid come on." When asked if there was a penalty for a normal landing where he wouldn't apply maximum braking if the anti-skid system was inoperative, he said the penalty would only apply if you were "trying to make your numbers" in the book made by the test pilots by applying maximum braking.

If there was a system failure on the Premier, you would first do the memory items, and then get the checklist. There were two checklists on the Premier, the normal written checklist and the electronic checklist. It was easier to use the written checklist since the electronic checklist was in the normal section and you would have to come out of that to get to the appropriate checklist for the failure. He said the advantage of the written checklist was that it had a picture of the annunciator light associated with the failure. He thought that FlightSafety always taught him to use the written checklist for systems failures since it was so difficult to navigate out of the electronic checklist.

He said he did not think they needed the anti-skid system on the landing at Thomson. He did not remember what the checklist items were for an anti-skid system failure, and would have to look at the checklist to find out. He said if you had that failure, you should go to the checklist. He said he did not remember getting the anti-skid light on the accident flight, and he had never had it before.

He said a balked landing was something that occurred in the air, and on the ground it was a touch and go. He did not remember doing a touch and go in the simulator, and never had done one in the actual airplane. He remembered doing touch and go's in the Sabreliner on the type ride at FlightSafety because they only had a level 2 simulator and you could not do the whole ride in the box. He said on the Sabreliner, for the touch and go, the instructor talked him through the things necessary to conduct the touch and go, like throwing the thrust up. He said it was a planned event since the instructor briefed him on it.

He said there was no procedure taught to him by FlightSafety for doing either a balked landing or a go-around after the wheels had touched down, other than a balked landing procedure while still in the air from another airplane that had touched down on the runway. He said the balked landing was an airborne maneuver. He did not know if there was a balked landing procedure after touching down on the runway.

When asked about voluntarily declining the FlightSafety LAHSO training, he said that he thought that he did all the supplemental training that was available. He did do some additional FlightSafety "live learning" and said he wanted everything they had available to train in. He said they also had a training program called something like "PPL" that involved an actual flight in the airplane. It was supposed to provide additional hands-on training, but the airplane was not available during his time in Wichita.

He said on the two previous events when he had the lift dump failure, the anti-skid was still available. When asked if he recalled anyone at FlightSafety telling him not to conduct a go-around or balked landing after touching down, he said "no," and he did not recall anyone telling him that during his training.

With respect to his rest the night before the accident, he did not recall any sleep problems. He said on the morning of the accident, it was he first early day in his flight sequence. It was not like it was the third day in a row of early departures, so he was not fatigued. In the lounge in Nashville, he did not recall any problems or interruptions to his sleep.

He said June the 27th was when they first based the airplane in Thomson, and they flew out of there about 3 times per week. There were NOTAMs on the PAPI that were inaccurate, and he told airport about it. For instance, the taxiway lights would occasionally cut off. He believed that the PAPI was not operational during the daylight hours since it would only come on when the runway lights were on high. The NOTAMs were not reflective of what was happening on the field. The airport was unaware of the lighting problems. He said he once was taxiing in when a King Air was taking off and all of the airport lights went off.

He said the landing lights and taxi lights on the Premier were not good, but there was a fix for that. He said he told the FBO (Jeremy and John) about the problems with the PAPI lights and how you sometimes would not know what you were going to get.

The snowflake on the FMS would put you at 50 feet over the end of the runway, and the PAPI would put you a little higher and longer down the runway.

For the passenger briefings, Jeremy would do those. He said that he, not Jeremy was responsible for turning the seat belt sign on. He normally would only turn the sign on without a briefing, unless it was "really rough" and then he would brief them. Dr. Roth always sat in the rear aft right seat because that was where the temperature control was. It was "the boss's chair." Typically on the morning flights, everyone would sleep. On the afternoon flights they would talk.

Regarding the risk assessment form he printed from online, he did not have a copy of it since most of his forms were in the back of the airplane were destroyed. He said the hard drive on his computer was recovered. He said he had talked to Kelly Vann on the day of the accident since he had previously been told the schedule would be changing toward the end of the year. He was told that at the time of the accident the schedule was supposed to get lighter after he first of the year but it had not. When he signed up to fly the doctor group in 2008, he had no idea of what the schedule would entail.

On the risk assessment form, he believed he was able to include his 200 hours, and that moved his assessment to the good column. He talked to Kelly Vann about the early morning departures going away after the first of the year and they had not. He did not believe there were any emails regarding the increase in the early flights, and believed he talked to Gail also about the schedule. With the previous doctor, Dr. Davis, he was told "we have to get up and do it, so you can do it."

2008 was a bad year since they had lost all their real estate flying since they had all gone broke. He remembered calling Kelly Vann in the afternoon on the day of the flight. He said Kelly Vann was Dr. Roth's "right hand girl", but she told him she saw Dr. Roth about as much as he did during the week.

He said he had "jumped deer" in an airplane before during landing while still in the air when they had wandered onto the runway, but had not done that while on the ground. He said that if he had to go around while on the runway, the first thing to do was to get the power on, and then flaps ten. You would also need to re-trim since typical landings would have you out of the normal trim for takeoff. The airplane was approved to take off with flaps 20. You would also need to get the lift dump handle back up.

Standard pitch for takeoff was ten degrees, and the bars would be set there for a normal takeoff. He remembered being taught the SNAP technique for a go-around. He said he never heard the term of pickle, pitch and power or anything similar to that.

Regarding his schedule, they also had to do some flying for overflow business for the doctors on Saturdays. He was told that the schedule was not going to change until the end of July, and then they were considering putting Memphis flights on the schedule.

He said based on his first FlightSafety training in Wichita, he was taught to fly Vref +10 at the marker, slowing to Vref at 50 feet, and then "collapse the throttles." During his recurrent training in ILM, they changed it to a different number hat added a couple of knots when crossing the marker. He said "what was very unusual was that they would not allow you to add anything for gust factor." This was the only airplane he had flown that had that restriction, and it was a problem for him on gusty days since he had had the stick shaker go off a few times as he got slow. When the throttles were at idle and he touched down, he was taught to get the nose down immediately. His own procedure was to touch down at 1000 feet, and get the nose down by about 1500 feet down the runway. He would then get the lift dump out immediately and start applying the brakes.

He said his criteria for a stabilized approach was to be Vref plus the new number that you looked up. He would fly 240 knots to the first fix, which was 5 miles from the 5 mile fix in the FMS, and then slow to idle and start getting the drag out to get the flaps out to full over the marker. They had no published SOPs for the Premier. He had done go-arounds when fully configured, Vref plus 20, and also no lower than 500 feet. He said he had told the pilots flying with him to let him know "anytime something didn't feel right."

He said he was still current in the King Air but flying it a lot less since he was busy flying the Premier. Jeremy was flying most of the King Air trips.

He said the landing lights on the Premier were on the overhead, and the switch for the anti-skid was something "you never, ever moved," as opposed to the King Air, where the light was on the nose gear, and you would have to wait until the gear was down until you go the landing lights. The landing lights for the Premier were typically turned on descending through 10,000 feet. He

said they never installed the updated landing lights on the Premier. He remembered talking to the tech rep, Michael Johnson, but he never got back to him with a pricing.

He said they had SOPs for a two man crew in the King Air, and he was applying those standards when flying with another pilot in the Premier. They did not have "two-crew operating procedures published for this airplane."

He said at FlightSafety, he was taught that when an annunciator light came on, you would put the airplane on auto-pilot and then get the checklist. If it was a yellow light, it usually would not have a memory item.

When asked if the lift dump system would retract automatically if he executed a go-around with the lift dump system deployed, he said the speed brakes would retract 80%, but he did not believe the lift dump would retract.

He did not recall if there was a discrepancy between the "snow flake" or Jeremy's glideslope, but typically the "snow flake" was taking you to a different point in space, and was usually lower than the glideslope because that was aiming to the 50 foot point above the runway, and the glide slope was aiming to a point down the runway. He said the standard vertical path was 3 degrees, otherwise you would have to override to have a path different than that.

Interview was concluded at 1225.

19.0 Interviewee: Sami Lynn Able – FAA Fleet Training Program Manager
Date: June 12, 2013
Location: NTSB Offices
Time: 0915 EDT
Present were: David Lawrence, Maryam Allahyar – National Transportation Safety Board (NTSB); Mark Mohler – Beechcraft Corporation (via phone), David Keenan – FAA (via phone)

Ms. Able declined a request to have a representative accompany her.

During the interview, Ms. Able stated the following:

She was the fleet training program manager with Flight Safety certificate. She had been in that position since August of 2010. Her immediate supervisor was Jeff Spangler and he was the front line manager. They were located in Wichita, KS. They were divided by fleet with the sister simulator in Wilmington which was also her program.

She started as a flight instructor and then became a charter pilot/chief pilot for a small operation Part 135. She was recruited by the FAA by the principle operations inspector in 2003 as the GA ops inspector. She held that position until 2010 when she joined her current unit. She did 2

hours of simulator time, including in the Premier. She also did occasional 135 checks. She was responsible for the Premier, Citation Mustang, and Cessna Caravan, which was a 208. Her total flight time was about 5000 hours when she joined the agency. She flew in the right seat two or three times a year in the Premier to give check rides. Those were single pilot check rides. She had given one type ride in the Premier and the remaining were the six months checks that the air carriers required to fly charters for part 135.

Her responsibilities included overseeing the training and the course work and course work changes and recommend them for approval or rejection; observe TCE checks and renew their authorizations; review TCE records; and review student records. There were about 10 individuals that were examiners on the Premier. At least once a year they were observed, plus additional observations. The extra observations were due to Part 135 requiring check airmen to be observed every 2 years, and since many were contract check airmen, the FAA would observe them give checks to carriers.

FlightSafety normally had a training program that they sell or give to the carrier. If a carrier liked the program, their principle operations inspector (POI) would sign off on it and approve it. She said the program belonged to the carrier and not FlightSafety. She had not reviewed the training programs that FlightSafety had for the part 135 carriers to compare them to the Part 91.

She said she went through the FlightSafety program to get her type rating on the Premier. She thought it was professional and they knew the plane backwards and forwards. The majority of their instructors had been with the program since the beginning and they knew the how the systems worked. She said the training was good. The training was two and a half weeks long.

She did not get involved in FlightSafety's billing and full service contracts. She was typed on the Premier in October 2010. She was also typed in the Mustang. She was required to go through recurrent ground school September of every year.

She said that FlightSafety had a TCE course put on by the CMU every year where they went through all the changes in the training. It was 8 hours for the initial and 4 hours for the recurrent training. These were conducted by a team at the CMU to keep it standardized. One of the team members would conduct the training at the center. The guest speaker for last year was a runway safety fellow. She did not know if the manufacturer was a part of these training events. On average, she looked at the TCEs about 4 times a month depending on when their renewal would be coming up. The requirement was annually for each individual. During these observations, they watched the TCE give a check ride. They also reviewed the TCE and the clients' records. She did not know the pilot involved in the accident. With the premier, 80-85% of the training was for a single pilot rating. Single pilot and crew training were divided up in the book to work with a crew member. With a crew training, the training hours would fluctuate. The ground

training was the same but it was the CRM that was different with crew. CRM was a part of all the training programs at FlightSafety. It was a module. It was generally called Cockpit Resource Management. It involved using all available resources such as the air traffic control and automation in the plane; so when you were by yourself, where else would you pull information from. They referred to 8900.1 for oversight of the program. There was guidance from the FAA for the Cockpit Resource Management but it was more about pilot being able to use available resources at their disposal.

She had not seen any issues with the FlightSafety during her oversight of the program. Flight Safety did keep track of the bust rates and substandard performances. She could not recall a percentage of these failed performances. Flight Safety submitted a spreadsheet to the FAA with the number of the check rides that were given and the number of check rides that were failed. The FAA did the math to calculate the percentage.

She said balked landing was basically a go-around. She did not know why Beechcraft called it balked landing and did not know if anyone had talked with the manufacturer about why they called a balked landing. She had not heard from the instructors at FlightSafety about a go-around being prohibited after the aircraft touched down; however, she recalled talking about an accident that happened in Europe where the pilot decided to do a go-around after landing but was not picking up speed and aborted the go-around and ended up overrunning. At FlightSafety they discussed the ramifications of the decisions and how long it would take the engine to spool up. This was discussed in the ground school. She could not remember if she had seen the procedures for no-go-around after landing. The balked landing checklist assumed that the plane was still in the air and therefore there was no discussion of the lift dump in balked landing. However, there were numerous discussions of not using the lift-dump in the air because the plane will not go. She had never witnessed a touch and go in the simulator.

She did not have an anonymous way for the TCE's to be able to report any issues or problems to her and no one had expressed any problems with the program. She got along well with all of the TCEs, and had an open door policy which she was going to reiterate to them.

She thought the "power, pickle, pitch" was a quick little reference to remember to push the go-around button, get the thrust lever forward, and pitch into the commune bars. She had heard many instructors say it that, and it was not specific to the Premier. She thought this was a quick little memory item and no one had considered it as a procedure since there was a checklist. In her personal opinion, she agreed that it would be helpful to have pitch guidance in the Premier. She said that if the pilot was not paying attention, the Premier could get quick on you pretty fast. She thought the Mustang was more of the entry level jet and the Premier was mainly for more experienced pilot. For a new pilot that would be coming from for example King Air, the cumulative effect of the ground school and simulator training and if there are weak areas they

would work on it. Pilots had access to all of the books before course began and depending on their motivation, they would get access to "myflightsafety.com" to review the manuals, handouts, and books.

She said FlightSafety did discuss accidents but had not discussed this specific one since the final report was not out yet. She also indicated that because there were no final reports yet, there were no changes or comments incorporated into their training.

She was not aware if FlightSafety's single pilot operations and training included any type of fatigue management or fatigue training.

Interview was concluded at 0955.

20.0 Interview: Daniel Buerki, Federal Aviation Administration
Date: June 12, 2013
Location: Via Telephone
Time: 1100 EDT
Present were: David Lawrence, Maryam Allahyar – National Transportation Safety Board (NSB); Mark Mohler - Beechcraft Corporation (via phone); Dave Keenan – Federal Aviation Administration (FAA) (via phone)

Mr. Buerki declined a request to have a representative accompany him.

During the interview, Mr. Buerki stated the following:

His name was Daniel J. Buerki, and he was 56 years old. His title was Manager/PCPM for the FlightSafety International (FSI) certificate management unit (CMU). That was a unit of the Wichita FSDO.

Prior to September 2007, FSI was 28 different certificates. It was then consolidated into one main certificate in 2007. The CMU was formed to oversee all of FSI training worldwide. He said the consolidation has really helped with standardization. He had 4 supervisors that worked for him, and he had 38 FTPMs that worked throughout the FSI system. 15 inspectors were located in Wichita, and the rest were scattered around the system remotely at various FSI facilities. He reported to the office manager, and under him he had 4 supervisors, who each had about 7-8 FTPMS. He said he would send an organizational chart via email.

He was hired in his current role in August 2007. Prior to that, he was the TCPM in Wichita for Cessna Centers. He held a type rating in the Premier, and estimated his total time as about 8500 hours, and had about 15-25 hours in the Premier. He was on the FSB for the Premier back in 2001 when the airplane first came out, and did some F and R (function and reliability) flying in the Premier. Prior to certifying an airplane, the ACO would require the airplane to undergo a number of hours of function and reliability testing before issuing a type certificate on the airplane, and he participated on some of those flights.

He went through the Premier type training in 2001. Ground school was with Ratheon, and all the airplane training in the actual airplane since there was no simulator, and they were trained by Beechcraft test pilots. He did help do simulator evaluations and TCE evaluations early on, but it had been about 10 years.

He said he would meet with Sami usually only when there was a problem or issue. Most issues were dealt with on the FTPM level. He had not heard anything specific on the Premier other than the recent accidents on the airplane. He was somewhat aware of the issues with the Premier that had come up over the years, but nothing major. He said the cadre of TCEs at FSI had a lot of stability, and there was not a lot of turn over.

He said early on the Premier had some brake problems that weren't very responsive, so they essentially put King Air brakes on the plane to make them more responsive. He had not flown a Premier after the modification, but had not heard of any problems since the Premier the new brakes. The other system modified after he got out of the program was the lift dump system. Earlier versions of the system were somewhat automatic and based on ground sensors and configuration. He also thought there was also a bit test that was required prior to flight. Beechcraft then switched out that system to a more manual system.

He said that he remembered that in the early days, you could not fly if the bit test was not normal, but his experience was mainly during the early days with the automatic system, not the manual system. During his flight training, he did not recall doing touch and go's in the Premier.

He said he reviewed the training records for the accident pilot, but did not study them too much.

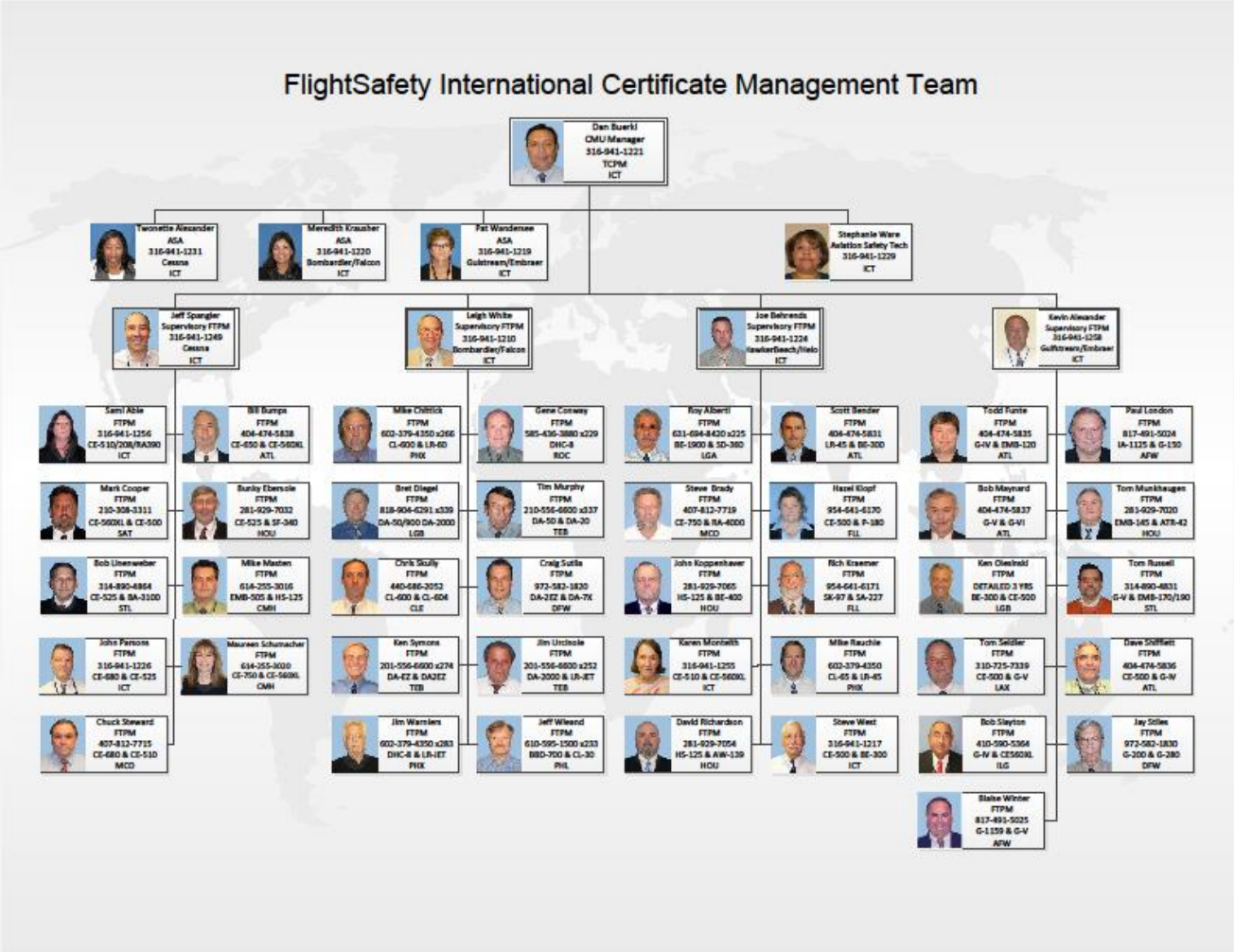
Regarding CRM and SRM training, he said the FAA does look at how this was trained at FSI, and the here is a lot of interchange in language between the terms. He said the PTS talks about it, and you are taught to use all available resources and cockpit organization. They talk about CRM in general in various modules, and then break it down when talking about SRM. The evaluation of SRM is during a check ride to ensure that the principles are being applied, and that is required in the PTS. There is also a module in the TCE training discussing CRM and SRM and what must be included in the examination. He believed there was an AC that talked about CRM and SRM, but Sami would be more up to date on specifics of the program related to the Premier training.

He said the Premier checklist he used early on was a typical Beechcraft checklist, and it used the terminology of a balked landing as opposed to a go-around. He said he remembered that there was a button on the throttles that would provide pitch guidance to the airplane.

He said the FTPM for the Premier had never come to him regarding workload issues, and the tasks assigned to her for oversight complimented her abilities, and he did not see her as being overworked.

He said that it was his understanding that the pilot involved in the Premier accident recently near the Great Lakes was not trained at a formal training center. He said training in a simulator was valuable to practice system failures.

Interview concluded at 1137.



14

21.0 Interview: Ed Walker, Flight Safety International Premier Instructor

Date: July 16, 2013
Location: Flight Safety Learning Center – Wilmington, Delaware
Time: 0915 EDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Mark Mohler, Beechcraft Corporation
Representative: Charles H. Smith, Smith & Moore PLLC

[14] Organizational chart provide by Dan Buerki, FAA.

During the interview, stated the following:

His name was Edward A. Walker, and he was 74 years old. His current title was instructor on the Premier. He was still current on the hawker 700. He had been an instructor on the Premier for about 4.5 years. His background included spending time in sales, and FSI was looking for someone with single pilot experience. Prior to FlightSafety, he was with Beechcraft sales in New York. He had an ATP with type ratings on the 390S, Hawker, King Air 300 and 1900. He estimated his total time was about 14,000 hours, with about 9,000 hours PIC. He said he had about 25 hours in the actual Premier, and some of that was factory time, and riding along on flights from buyers. He had about 3 or 4 landings in the actual Premier. He had never experienced any abnormals during any of his flights on the Premier.

He received his Premier training a FSI Wichita. FSI also did initial training in Delaware. He conducted primarily initial training and ground school. He schedule changed weekly, and he was there 5 days a week training clients. This week was a light week for him. There were 3 Premier instructors at Delaware, with one new hire. He was a TCE, and he said he guessed he did about 7-8 type ratings each year.

He said he could not immediately place Rick Trammel as someone who he trained, but did go back and briefly look at his training files. He said Rick's training was "non-remarkable" and there was nothing that stood out to him. He did not recall ever speaking with Rick outside of the training environment. He said it took several years of seeing someone come through training before they became familiar with them.

He said simulator training for recurrent was 3 days long. The first day was "basic airwork review," with approaches to stalls, steep turns, TCAS events, returns to the airport for precision and non-precision approaches to a miss and landing. Day two was ice and rain, V1 cuts, and various abnormals were introduced throughout the session, single engine approaches and misses with various complex FMC issues. Day 3 was "high, hot and heavy" and windshear, with just enough time to do remedial work if they needed to. This was all to satisfy Part 61.58 requirements.

Ground school was during the same 3 days with a systems review and a performance review, all from a pilot's perspective. He said most clients preferred to do several hours of ground school each day, followed by simulator training. They would either do the simulator first and then the ground school, or ground school followed by the simulator. Simulator sessions were four hours for 2 crewmembers, or two hours for single pilot training. For Rick's recurrent training, he was the only pilot in the simulator.

In ground school, on day 3, they would review performance data as related to adverse conditions, which meant hot, high and heavy conditions. He said he would generally introduce a zero flap and flap 15 takeoff so the client would see the difference in performance. For landings with a system failure, he would introduce those on day 2. Day 3 focused on hot, high and heavy. He said he trained by habit, so for Rick on day 2 would have been V1 cuts and single engine work, including dual hydraulic failure, most likely using Colorado Springs or Reno.

When he was shown a copy of Rick's training record, he was asked about a rejected landing on day 2, and could not remember specifically what was taught to Rick but said he typically would brief about what constituted a rejected landing. He would use various triggers to reject a landing, like a truck on the runway, and would occur pretty much at about 50 feet.

He said the difference between a missed approach and a rejected landing was that a missed approach was a failure to have visual reference at MDA or DA, where a rejected landing was a visual maneuver where something caused the landing to be discontinued.

He said that FSI taught stabilized approach criteria on the Premier, and was briefed on almost all approaches. The student was to be aware of configuration at ½ mile out, weather conditions, runway conditions suitable to land. He said that the criteria was on their briefing slides and other enrichment training aids. He said the guidance was also in the Premier POM. Students were taught to go-around if they did not meet the stabilized approach criteria, and that was taught at FSI.

He said he called them go-arounds even though the procedure was called a balked landing in the Premier checklist.

He said on Rick's day two of the simulator, the hydraulic failure in the syllabus was likely a dual hydraulic failure he gave. The hydraulic problem introduced on day one was likely a pump that did not come on line during engine start. He could not remember specifically about Rick's dual hydraulic failure in the simulator, but said he generally would give the failure following gear retraction after takeoff, and he would teach the student "to work the problem" using the checklist. They would go to "yellow tab 13" and work through the procedure. It was the student's option if they used the paper checklist or the electronic checklist, and they would accommodate the student's operational philosophy. They could user either checklist. He could not remember if Rick used the electronic or paper checklist, but most used the paper checklist following the checklist, there was an emphasis on a zero flap landing and braking issues for the landing. They would also emphasize the landing distance since it would increase the distance 133%. This was because the only braking apparatus on the airplane was essentially the brakes. They did not have thrust reversers. He said they would have to modulate the braking during the landing, and they would not have the anti-skid system. They had a stand-by accumulator and used the hand brake to stop.

For a performance calculation, the pilot would go to the brown tab to get the performance numbers to apply the penalty for landing. He said pilots would also use the calculators on their cell phones to do the math.

For an anti-skid failure, he would first expect the pilot to know that they still had normal braking available. He would then expect the pilot to use the checklist, determine the proper flap setting for landing, and then apply the performance penalty for the landing. The checklist emphasizes that the landing must be made with only flaps zero or 10. He said he had seen pilots get confused about whether or not they had normal braking, and some have reached for the hand brake instead. He attributed that to "sim-itis." He would de-brief that following the maneuver. He had never had a student get confused on a normal landing and think they weren't using the

anti-skid system. He said every landing had anti-skid available, but a pilot could fly this airplane and never get to a braking intensity that he would feel the anti-skid working, depending on the length of the runways they used. He said if you were operating with under 4,000 feet of runway and were being aggressive on the brakes, you should feel the anti-skid, but if you were operating on longer runways you may not feel the system operating. He said whether you plan to use the anti-skid system or not, if the light was on indicating an anti-skid failure, you would have to run the checklist and apply the performance penalty. If necessary, you would have to divert to a longer runway. In his experience, after initial training, most pilots would know to apply the penalty and not ignore it.

When shown Rick's training record, he was asked about a rejected takeoff training event where Rick continued a takeoff that should have been rejected. He said it involved an engine roll-back at 90 knots to trigger a rejected takeoff, and instead Rick continued with the takeoff. They de-briefed the maneuver afterwards. He said he asked his students to brief him out loud when they were single pilot so he could know what they were thinking. For that maneuver, he believed he had Rick re-perform the maneuver.

He said FSI did not teach go-arounds or balked landings after the airplane had touched down, and the "standard program" taught at FSI was that "when you touchdown in a turbo-jet airplane, that's the end of the landing." He said he could think of only one time when a student attempted a go-around after landing, and it involved a lift dump failure on landing where the student retracted the handle and attempted to takeoff again. That event was on a check ride, and he stopped the simulator and check ride since it was an "unsat" event.

When asked if the prohibition to do a go-around after landing in the Premier was written anywhere, he said he could not remember. He said at FlightSafety, they did not teach touch and go's. They looked at it as "tribal knowledge". During the ground school, when they teach the lift dump handle they teach that there is a prohibition that you are not to use the lift dump handle unless you are on the ground. He said they also have a service center across the street to show students the actual airplane wing for a walk around, and how effective the lift dump panels are. He said he would always stop the simulator if he saw the pilot reaching for the lift dump handle at any time other than on the ground. He said he could not provide a reference in the manuals that said if the lift dump was used on the ground, you were done flying and committed to the landing.

He said CRM was discussed with Rick but he wasn't sure of specifics. His pattern was to give out the CRM briefing cards, even during recurrent training, and he would discuss them with emphasis on single pilot cockpit resource management. He said there were differences between single pilot CRM and crew CRM where the single pilot needed to focus on the ability to prioritize tasks, and develop a proper habit pattern to ensure items are accomplished. The briefing cards were applicable in both cases, along with the tasks and process of defining error chains. They try to emphasize that once you are in the approach environment, "you have to stay ahead of the airplane," and that was more critical in a single pilot airplane. You needed to properly manage tasks, particularly flying the airplane first before the automation.

He said the most common challenge students had that he saw when flying the Premier simulator was not following up on a mode selection, and looking at the "marquee" on the top of the attitude indicator, and ensuring the mode they choose is active. The single pilot does not have the relief of another pilot to back them up. He said he believed most the pilots coming through on the Premier had previous jet experience.

He said that there was a difference in a go-around from a King Air and the Premier in that you have to handle the props for the go-around. When asked if he had ever heard the term "pickle, power, pitch" he said he had, and believed it had a military foundation. He said he personally did not teach that, and was not taught it during his training. He was taught to hit the go-around button on a go-around. He said he "absolutely" taught the students to hit the go-around buttons on all go-arounds, and it gave a 10 degree pitch up, and sequenced the flight management system for tracking. He said they also taught students to use it on visual go-arounds and rejected landings. When asked if that was a procedure or guidance stated in the manuals, he said he would have to look at the checklist to know.

He said when he had a crew, they taught CRM and communication between the pilot flying and monitoring. There were some differences in the communication depending on if the operation was Part 135 or 91. The task assignments were delineated between the crew members, where that wasn't available for the single pilot. With Part 91 operators, he said he had seen a variety of operators, some being seasoned and some not so much. He said they tried to focus them on the formal CRM and checklist to reduce task loading. The biggest challenge for Part 91 operators in CRM was most had not had a formal background in CRM training. There was a reluctance to formalize their procedures, as opposed to the crew operators. He guessed that the breakdown of students going through the training was about 50/50 from crew and single pilot on the Premier.

During the landing phase, from 50 feet to the runway, procedurally he would look for 50 feet at the threshold, thrust levers to idle, maintaining pitch, minimal flare, main gear then nose gear, lift dump, and then maximum breaking. He said that on recurrents, most pilots have their habit patterns.

He said that on occasion he had given a client a malfunction during the approach phase from the final approach in bound. They would have to first evaluate the fault top determine if it would necessitate a go-around to handle at a higher altitude. He said the criteria for a pilot to decide to continue or go-around would have to be addressed on a case by case basis. For instance, if you have a single hydraulic pump failure, and looked down and saw that you had 3000 pounds of pressure, you could continue for the landing. For a dual hydraulic failure, you would go around.

He said he remembered that Rick was able to keep up with the recurrent syllabus, and did not remember seeing anything unusual in his training other than the one reject that he continued flying on.

He said he had communicated with instructors in Wichita and they send emails to each other. When asked about the Beechcraft Safety Communique regarding landing performance awareness, he said he provided that to students all the time.

He could not remember if he ever saw Rick fatigued during his training. He said the shortest runway they used in training was about 5000 to 6000 feet, and they were limited to Part 60 airports in the database. They would generally try to match the runway the client would fly out of if it was in the database.

He said he unfortunately had not had the opportunity to meet many Beechcraft pilots, and they did not have much interaction with them as far as the Delaware facility was concerned. When asked if it would be helpful, he said that any type of communication would be helpful.

He said the arrival profile included 170 knots flaps ten on procedure turn outbound or on downwind, localizer established target ref plus ten, 1 dot below the glideslope gear down, glideslope captured full flaps, airspeed stable at ref plus ten, then Vref at the threshold.

He said if he had a student see an anti-skid light illuminate during the approach, he would expect the pilot to reject the approach and handle the abnormal.

Interview concluded at 1040.

22.0 Interview: Robert Campbell, FlightSafety International Premier Instructor

Date: July 16, 2013
Location: FlightSafety Learning Center – Wilmington, Delaware
Time: 1045 EDT
Present were: David Lawrence, Maryam Allahyar – NTSB; Mark Mohler, Beechcraft Corporation
Representative: Charles H. Smith, Smith & Moore PLLC

During the interview, Mr. Robert Campbell stated the following:

His name was Robert P. Campbell, and he was 44 years old. His current title was Ground and Simulator Instructor on the Premier. He had been an instructor since March of 2012. He was also a TCE and his initial was done in May of 2013. He was the instructor for day 2 and day 3 of Rick Trammell's recurrent ground school. His background included having been an airline pilot and check airman and APD for Colgan Air for approximately 10 years on SAAB. Prior to that, he worked for SAAB Airline. He started with FlightSafety in March of 2012. He estimated his total time was about 7,800 hours, with about 5,500 hours PIC. He was typed on the Premier 390S; however, he did not have any actual time in the Premier. He thought he had been last trained on the Premier in March of 2013.

He said that on day two of the ground school, they taught various systems and on day three they finished up on the systems, performance, systems test and review. They also taught non-normals during day two and three as well as braking and non-normals associated with braking. They would generally discuss how brakes worked from pilot operational standpoint and what the procedures and ramifications were for performance if the braking system was in a non-normal configuration. The only memory one was related to lift dump failure where you would have to apply maximum braking. They also discussed the anti-skid system in the same module. There

was a non-normal procedure for the failure of anti-skid system and a checklist for the failure. They taught students about the performance degradation and landing distance penalty related to percentage of increase in required landing distance.

He recalled Rick Trammell when he had looked at his training record and his photograph after the accident. He could not recall anything specific about the training. He said that nothing specific came to mind about Rick. He normally remembered the clients who had difficulty.

His typical schedule as an instructor varied depending on how busy FlightSafety International was. Depending on the scheduling, it was not unusual to break up the ground school instructors if one had to do a check ride. Looking at the schedule, he thought that Rick may have been the only student in the ground school. It was not unusual to have one or two clients in class at a time since the Premier is mainly a single pilot airplane. He did not know exactly what percent of the clients came for training as crew. When teaching the ground school, as far as the course was concerned, single vs. crew was similar in content except for the CRM which was "tailored" for single or crew. The CRM training was interjected into everything. It was not a standalone unit.

Mr. Campbell was presented with the gray and blue CRM handouts used by the FlightSafety International. He indicated that the cards were handed out during initials and were used during simulator training. The cards were also handed out during recurrent if the client did not have them. They used the same handouts for the crew or single pilots that were going through the training. They normally stressed workload management and task prioritization for single pilots. Coming from a CRM background, the transition to a single pilot was not difficult for Mr. Campbell. He was familiar with the challenges that might present themselves to a single pilot, such as pilot incapacitation which would put the crew in the same situation as a single pilot.

He indicated that during simulator training, they asked the clients to verbalize what they did so that as instructors they would hear the pilots' thought processes. He also thought that verbalizing the processes aided him to remember things he said out loud better.

He said that they taught stabilized approaches by 1,000 feet and their profiles taught that at the final approach fix, they had to be fully configured and on speed, meaning configured for the situation such as single engine, two engines, or circling. On speed meant at final approach fix they had to be at VAS which was the approach speed calculated when landing speed was being calculated. At 50 feet, the profile required to be at Vref. Then thrust levers would be brought to idle. Via the new FAPTS, pilot would be shooting for minus 250 and plus 500 for a specific aim point for touching down (this meant no earlier than 250 feet and no greater than 500 feet in horizontal distance from aim point). Once the mains touched down, the nose wheel would be brought down, followed by brakes within one second after touchdown and then lift dump deployed within one second after brake application. In practice those should happen simultaneously and the brake application should be at maximum. Go-arounds after landing were not taught. He had not been taught or had taught any students to do go-arounds after landing or touch-and-goes. He did not know of any guidance that restricted that. He did not know of any manuals or AFM's that defined a commit to land point for the Premier.

He said that if on the final approach they had an anti-skid fail light, they would not know if the runway length was sufficient with the landing penalty. At that point, the approach needed to be discontinued to run the checklist and calculate the new speed and required landing distance. This was taught in the simulator. In their initial training, they covered the anti-skid system and in the recurrent training, they provided a scenario with total hydraulic failure which would result in the anti-skid failure. He could not recall any of his students not conducting the performance calculation.

He indicated that at FlightSafety, they taught their students about both the electronic and the paper checklist. They did not require them to use one or the other but they would let them choose. The preference for the type of checklist was almost an even split.

In the simulator at FlightSafety, they did teach go-arounds and balk-landing. He defined balked landing as a rejected landing below 50 feet. A missed approach was generally regarded as a discontinuation of an instrument approach from an MDA or a DA. There was no difference in the procedures between the two. He was not familiar with the phrase "pickle, power, pitch". In teaching balked landing or go-arounds, they would have the pilot call out "go-around" when the decision was made to discontinue, then press the go-around button, maximum thrust, pitch up to command bars, flaps to 10, positive rate, gear up, Vac speed, and flaps up. After these procedures, they would conduct the missed approach checklist (SNAP check). When they pushed the go-around button, the flight guidance system would go to the go-around mode and cancel any of the previously selected flight guidance modes. This was defined in their briefing slides when they pre-briefed during each simulator session. This was in the FlightSafety's previous version of the pilot training manual; however, it had since been removed from the latest version of the manual. He had seen a small percentage of students having difficulty conducting a go-around but to varying degrees.

He explained that by tailoring CRM, he meant that instructors would take some of the factors and emphasize those that could get a single pilot in trouble such as workload management. The instructors would emphasize single pilot or crew CRM by picking few of the items during briefing. They discussed fatigue management also.

He could not recall any discussions on "not performing go-arounds after a touchdown" when he was going through the training a year and a half earlier. He also could not recall the issue being addressed during the classroom training of the systems.

At FlightSafety, each instructor had a set of specific items they covered all the time and time permitting, they would insert other abnormalities for training as well. Anti-skid was always discussed. If there were no performance ramifications or loss of navigation capabilities such as a generator failure during training, they would not recommend a go-around. The Beechcraft communique about stabilized approaches and landing factors was referenced during the initial training. In recurrent training, landing performance and stabilized approach were discussed during systems review. He would ask his clients whether they had Beechcraft's communique and if they did not, he offered it to them upon their request. Also in the POM, there was a chapter on landing distance performance in which that communique was distilled from. In that chapter they discussed how they would arrive at the landing distance number.

He said that they could only use the runways approved for Part 60 in training. For a short runway they used White Plains, runway 29. He used the White Plains runway because that was the one used during his training. He thought 29 had a specific displaced threshold.

In ground school, they discussed three examples of overrun accidents. They discussed these cases in all recurrent trainings during the performance unit lessons.

They taught about the engine spool up time during ground school.

He had met one of the Beechcraft instructors who was a former demo pilot. They did not have any formalized meetings with instructors and TCEs with Beechcraft.

Interview concluded at 1135.