ATTACHMENT 1

Interview Summaries (7)

**Interviewee: 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 clam 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 wind 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 checkride 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. 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 Milken, 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.

**Interviewee: 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 pound 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 pilot 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.

**Interview: Scott Dickmeyer, FlightSafety International Premier Program Manager**
**Date: April 18, 2013**
**Location: Flight Safety Learning Center – Wichita, Kansas**
**Time: 0945 CDT**
**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 "whanever" 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 CDT.

**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 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 CDT.

**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 CDT.

**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 reversers 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, 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 EDT.

**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**

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 EDT.