NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

February 24, 2014

Addendum 1

OPERATIONAL FACTORS

DCA13MA133

Contents

A. ACCIDENT

Operator:	United Parcel Service (UPS)
Registration:	N155UP
Type:	Airbus A300-600
Flight:	UPS #1354
Location:	Birmingham, Alabama
Date:	August 14, 2013

B. OPERATIONAL FACTORS GROUP MEMBERS

Captain David Lawrence - Chairman
Senior Air Safety Investigator
National Transportation Safety Board (NTSB)
490 L'Enfant Plaza East S.W.
Washington, DC 20594

Dr. Katherine Wilson[1]
Senior Human Performance Investigator
National Transportation Safety Board
490 L'Enfant Plaza East S.W.
Washington, DC 20594

Captain Normand A. Bissonnette
Aviation Safety Inspector
Federal Aviation Administration (FAA)
1601 Lind Avenue SW
Renton, WA 98057

Captain William Drew Middleton
UPS A300 Check Airman
Independent Pilots Association (IPA)
3607 Fern Valley Road
Louisville, KY 40219

Captain Lawrence Ashby
UPS Flight Training Supervisor
A300 Check Airman

Captain Nathalie de Ziegler[2]
Air Operations Advisor
Bureau d'Enquêtes et d'Analyses (BEA)

[1] Dr. Wilson was the NTSB Human Performance Group Chairman. Operations and Human Performance Group activities were combined during the on scene activities in Birmingham, AL, and follow up work in Louisville, KY and Toulouse, France.
[2] Captain de Ziegler and Captain Bonnifet were Technical Advisors to the French Accredited Representative.

802 Grade Lane
Louisville, KY 40213-2622

Bat. 153-200 rue de Paris
F-935352 Le Bourget Cedex, France

Captain Michel Bonnifet
Airbus Test Pilot
Airbus S.A.S.
1Rond-point Maurice Bellonte
31707 Blagnac Cedex, France

C. SUMMARY

On August, 14, 2013, at about 0447 central daylight time (CDT)[3], United Parcel Service (UPS) flight 1354, an Airbus A300-600, N155UP, crashed short of runway 18 while on approach to Birmingham-Shuttlesworth International Airport (KBHM), Birmingham, Alabama. The two flight crew members were fatally injured and the airplane was destroyed. The cargo flight was operating under 14 Code of Federal Regulation (CFR) Part 121 and originated from Louisville International-Standiford Field Airport (KSDF), Louisville, Kentucky.

D. DETAILS OF ADDENDUM

Following completion of the original Operations Factual report and the Investigation Hearing on February 20, 2014, group consensus on several remaining interviews was completed. This addendum incorporates those additional interviews.

E. ADDITIONAL INTERVIEWS

1.0 Interviewee: John Heard, UPS, B757 Domestic First Officer

Date: September 25, 2013
Location: via phone
Time: 1105 EDT
Present: David Lawrence, Katherine Wilson – NTSB; Lawrence Ashby – UPS; Drew Middleton – IPA

Mr. Heard declined representation.

During the interview, Mr. Heard stated the following:

His full name was John Allan Heard and he was 56 years old. He had been with UPS for 13 years and had over 17,000 hours total flight time. He graduated from Auburn University, then worked as an aviation insurance underwriter flying a Beechcraft Bonanza to cover his territory primarily in North Carolina and South Carolina for 4.5 years. He then worked for Piedmont

[3] All times listed are CDT unless otherwise noted.

Aviation GA division in Norfolk attempting to sell new Beechcraft airplanes. He got a SIC check at Piedmont. He then moved to Nashville, TN, and flew "for anybody and everybody." When he got 1500, he was hired by Comair out of Cincinnati for 11 years flying Saab 340s and upgraded to a CL65 captain. He was hired by UPS in 2000 as a flight engineer on the DC8 and then transitioned to the right seat on the B757. He had about 12,000 hours as PIC.

Mr. Heard was asked to describe his interaction with the accident FO in March 2013. He thought he sent the accident FO an email after they met on March 12, 2013, which said it was nice to meet her and he reemphasized to her "don't fly FAT[4]." He also included a copy of his facilities event report.

He recalled that he had come into the Air Service Center (ASC) ready room, which was a big room with multiple tables where crewmembers would meet those they were to fly with, get their paperwork, etc. The morning he met the accident FO, he was in SDF and there was a lull in the action. It was during the transition between the inbound and outbound flights so it was not really crowded. He saw a female pilot in uniform at the end of a table with her face planted down on the table. He took a picture with his iPhone but subsequently deleted it about 10 minutes later because he realized "it was not the cool thing to do." Sometime during his tenure in the ready room and after seeing her, she popped her head up and he could tell that she was not feeling too good. He sat down to talk to her. He introduced himself and she conveyed to him that she was "totally exhausted." He asked her why she did not go upstairs to a sleep room, which they were entitled to if they were on the ground for 3-5 hours. She said she would but they had given her an exterior room. Those words "rang loud and clear" with him because he knew how bad the exterior rooms were. The interior rooms were "fabulous;" UPS spent the money. He told her that he had been at UPS for years and he had tried to get the company to be contractually compliant with the exterior rooms and he could not sleep in them either. He told her he called fatigued after getting an exterior room because he could not get "a restorative of nap" and a nap could pay tremendous dividends. He had communicated numerous times with Member Rosekind at the NTSB about the inadequacy of the sleep environment and the ability to get a nap during the sort. He told her he had been engaged with the company for a number of years and he had just filed another event report, and that she should file a facilities report about the exterior room every time she got one or at least occasionally "to keep it on the front burner." He "implored" her not to fly fatigued, it was not worth it. He could tell she was "really really wiped out." He thought they had met on a Wednesday or Thursday; if a pilot started a pairing on Monday night, the sleep debt started accruing Tuesday and then Wednesday. She shared with him that she was a terrible daytime sleeper; she found it extremely challenging to sleep during the day. He thought he had filled out 4-5 facilities reports for the exterior sleep rooms, filed an ASAP report and filed a safety report. It was a big item for him. He was very passionate about it. When he got to his hotel later that day, he sent her an email that said "don't fly FAT." He also included his most recent facilities event report for the exterior room in SDF. He had no further contact with her at all. He did not know if she ever filed an event report on the facilities. He did not have any further contact with her after the email he sent her. She did not respond to his email.

He had never heard anything about her being tired or falling asleep on the airplane through the grapevine. He occasionally went on the "bar n grill" but did not recall seeing anything in

[4] [4] FAT is the UPS crew scheduling code for "fatigue."

reference to her. He had minimal interaction with the Airbus crews. The "bar n grill" was the IPA in house "b...." line. There was a lot of good interaction on their about safety. There were different categories to start a thread; often times it was used for safety. He sent an email to Member Rosekind about the thread on sleep medications and what pilots were taking at UPS to combat fatigue. He had removed the names from the thread before sending it. He thought he sent that email about a year and a half ago. Mr. Heard thought it was fascinating and was not sure if UPS had an issue or not.

He was asked about the response he received to the event reports he had filed. He said at some point during his endeavor, he was told by the company there was not a noise issue and at other times he was told the company was aware that there was a noise issue at certain times. The corrective action for exterior rooms in SDF in his personal opinion would entail minimal dollars. It had been a real challenge and he referred to it as "a fight." He was told that he was the only pilot complaining so they would not take corrective action because one pilot was complaining. He knew without a doubt and had no doubt that he was not the only one complaining. The response from the company had been disappointing. There was a vast disparity between interior and exterior rooms; the interior rooms were magnificent sleep environments for mitigating fatigue and the exterior rooms were impacted by sort operations noise and were not a good environment for fatigue mitigation. There had been a little bit of movement but then it stopped then movement and it stopped. Regarding what movement he had seen, it was his understanding that UPS had possibly earlier in the year reached out to a window vendor to replace the windows and properly insulate the windows. Ian Cassidy, the IPA facilities committee chairman, indicated they could get a vendor involved to sound proof the windows. Mr. Heard did not know what the current status was.

He requested through his ACP going back to 2008, until such time that the exterior rooms were contractually compliant, to please have the person who assigned sleep rooms to assign him an interior room. He requested this but it did not happen because they had certain guidelines. Regarding guidelines on how sleep rooms were assigned, he said right now the company stated the hot standby crews had first priority for the interior sleep rooms, which he did not agree with; the guidelines stated that all pilots had equal priority to the sleep rooms. He felt that by doing these assignments of rooms, the company was acknowledging that there was a difference between interior and exterior rooms. He disagreed with how rooms were assigned because pilots who bid hot standby usually lived in the domicile so they slept at home during the day and as a result could better control their sleep environment whereas a line pilot flying a trip had been on a layover in a hotel.

Mr. Heard was on the hotel committee for IPA. There were problems sleeping at hotels. There were problems sleeping during the day; the accident first officer had problems. If an event report include hotel issues such as housekeeping issues, he got copies of the reports from crews throughout the system. Hotel daytime sleep interruptions that crews were experiencing were vast and numerous, and related to issues such as housekeeping, maintenance, and renovations at hotels. Hotel issues were a factor in the human factors piece of fatigue.

When he called in fatigued previously, there was no disagreement and his sick bank was not debited. He called fatigued earlier this year after he had been assigned a simulator support

second session and did not sleep good the night prior to the 0800 show time. He had been in a hotel because he did not live there. He decided he was not as sharp as he should be to do a proficiency ride with another pilot. He got docked from his sick bank. But the other times, when he had been assigned an exterior sleep room and was not able to nap, there was no problem at all. He filed an ASAP report, the ERC came back and said they operated in a tough environment on the back side of the clock but the sleep room issue was a contractual issue as opposed to a safety issue. That response "astounded me." The ERC had company, union and FAA representatives on it.

He had sent in excess of 50 emails to Steve Whyte, IPA, since the flight 1354 accident and had not received a response. The corporate culture at UPS as it pertained to the importance of sleep and naps he felt was vital to the investigation if fatigue was a piece of the puzzle.

He had been on the "front lines" regarding fatigue since 2005.

He had also discussed with the company the semi-private sleep rooms in Philadelphia and Rockford. It all started in 2005 when he filed an event report about noise in Rockford which did not have beds at the time, but the dynamics of the noisy environment never changed.

He was the hotel committee representative for IPA.

The sleep rooms in SDF were on two floors. If there was an overflow of hot standby crew members, hot standby crews would be bumped up to the third floor. There was usually a supply of interior rooms following the hot standby assignment. The level of hot standby crews changed, it was dynamic and depended on weather conditions throughout the system. The level of hot standbys fluctuated nightly to his understanding. Asked if a pilot could request an interior room after the hot standby crews were assigned or if they "take what they get," he said pilots took what they get. He had tried to get an interior room but maybe needed to change his strategy. It was not a good feeling to know he got an exterior room, especially midweek.

The hotel committee had nothing to do with rest facilities at sort facilities. There was a separate committee which was the facilities committee. Asked if the facilities committee had filed a grievance about the exterior sleep rooms, he said he had personally filed a grievance since the flight 1354 accident and a facilities grievance for Rockford, IL, in 2005 or 2006 that he took down at the request of the union. He was told there was going to be a grievance filed by Harry Trefes, IPA executive board member, but to his knowledge it had not been filed.

When he took the picture of the accident FO sleeping, his motivation was to document that fatigue was an issue at UPS but then he came to his senses that it "wasn't a cool thing to do."

He considered the exterior rooms were noisy even with earplugs. He did not know how anyone could sleep with a headset on. He found sleeping with earplugs was uncomfortable to sleep with and you could still hear sort operations. Some guys were able to use earplugs to block out the noise. He did not wear a headset or earplugs at hotels.

According to an email he had, there was a sound level measurement made in the exterior rooms at SDF. IPA was not present. He did not know at what time of day the measurements were taken, at what periods or during which time slots or how many times it was taken. He requested a copy of the report, but never received it. There was a vast disparity between the interior and exterior rooms.

He hoped there was follow up with the emails he had sent to IPA. His endeavor, which started in 2005, had been ongoing and he had documented "pretty much everything." If the NTSB was interested in developing that picture, the information he brought with his emails he thought would help develop that picture. He still had more to send because he had more information regarding Rockford, IL, sleep rooms that he thought was important to fatigue mitigation at UPS.

The interview concluded at 1145.

2.0 Interviewee: Matt Amesbury, UPS Dispatch Trainer

Date: January 28, 2014
Location: via phone
Time: 1230 EST
Present: David Lawrence, Katherine Wilson – National Transportation Safety Board (NTSB); Larry Ashby – UPS; Drew Middleton – IPA; Normand Bissonnette – Federal Aviation Administration (FAA).

Mr. Amesbury was represented by Mr. Kenneth "Ken" Kishman, UPS Aircraft Dispatcher, TWU representative and Air Traffic Systems Manager.

During the interview, Mr. Amesbury stated the following:

His name was Matthew John Amesbury and he was 50 years old. His current title was Dispatch Trainer for flight control dispatchers. His date of hire was April 1991. He became a licensed dispatcher just prior to starting at UPS. He received his dispatcher training in Anchorage, Alaska (ANC) at the Travel Academy. He started out as a load planner in ANC for 3 years, working weight and balance. He was not sure of his official title then because it changed several times. He was hired as an assistant dispatcher in Louisville (SDF) in 1994, and was signed off a year later as a domestic and international dispatcher. He worked as a lead dispatcher for 3 years, an ATC coordinator lead for 2 years, the TWU safety chairman for 3 years, TWU union steward, and as a dispatcher trainer. He did actively dispatch, and that was part of the trainer position, which required a minimum of 16 days on the desk, which was the equivalent of 1 month each year, on both domestic and international desks.

For international dispatcher training, there were 7 days of classroom training, and 2 weeks per theater desk training as a minimum, and with 3 total theaters it was at least 6 weeks of on the job training.

Before a dispatcher was hired, they were required to have a minimum of 3 years' experience as an active flight dispatcher. He said that was not always the case but he did not recall when that

requirement went into effect. UPS put them through basic indoctrination course that included general subjects, fleet systems training, training on the flight operations manual and operations specifications, and flight planning. He said it was extensive training that included about 6 weeks of classroom training, and they would also spend domestically about 6 weeks of on the job training with another licensed dispatcher.

UPS had not hired a dispatcher without previous experience for at least 5 years. The FOM Volume 2 training manual was included in training, and they would "skim through FOM Volume 1." It was "mostly administrative stuff," related to Volume 1, like jumpseat information, company policies, etc., and did not include dispatch related material. The "meat of what we train" was in Volume 2.

After ground school, the dispatcher would sit with an OJT instructor dispatcher, "we leave it to the instructor on when to integrate them" into the operation. They sit with them and observed their workflow and progressed from there a little at a time, based on instructor feels appropriate to get them more experience. The instructor got the dispatcher more involved until they were working flights. After 6 weeks of OJT, if the feedback was positive and dispatcher was able to work on their own, they gave them an oral test, practical, and a written test, conducted by standards supervisors. He had not taken those tests so he could not say what was on them. There was a score the dispatcher must get, and he believed it was a 90%. He remembered that for his exam, he did get feedback at the end of the test, but that was a long time ago.

Competency checks on dispatchers, performed by the standards supervisors, and some by floor supervisors were done on a yearly basis with an established base month. For competency checks, he may help with writing the questions, but otherwise was not involved in competency checks. He conducted the ground school training in the classroom, but did not currently do the practical training.

He said the FAA did come in and sit in on the dispatcher's ground school course. The dispatch inspector sat in on at least one recurrent, and some initial classes, but they had not hired many dispatchers lately. He could not recall how often the dispatch inspector had been in there. FAA inspectors would also come in and do a records review, and the FAA had done various audits. The FAA inspector was Jack Heinlein.

Recurrent training was two classes required each year, outlined in the FOTM for training classes, one in the fall and one in the spring. For international dispatchers they would also get an extra day of recurrent class once yearly. They had a list of required recurrent training in the FOTM, and covered subjects in that list, including navigation, joint responsibility, weather, and NOTAMs. It included all the topics originally covered during the initial training. They also had Dispatcher Resource Management (DRM) training, which generally was 1 hour, and might be split up into different scenarios. Lecture and scenarios were presented. An example would be to have a scenario prior to block out, the flight crew would call the dispatcher with a maintenance item, or it could be a problem enroute. They would go through the functions the dispatcher could use to handle that situation, and the subject matter experts available to him to handle a particular scenario.

Joint responsibility was trained at UPS, but it was up to the trainer and the situation, and was usually scenario based. They did a class yesterday that went over approaching thunderstorms, and how the dispatcher would handle that situation, how he was to handle it. They did not have a fixed training course, and it changed each year since it was primarily scenario based. They picked scenarios that had been identified over the year and brought that information to the dispatcher. The scenarios were done as a classroom. It was presented as a classroom in an open format, and dispatcher could talk to each other. Feedback was immediate during the class, and if someone followed a procedure incorrectly, it was addressed there.

The 50% responsibility was assumed by the dispatcher, and it was incorporated in the scenario based training, and they would evaluate how they performed in those situations that the crew may not be aware of, and how would they communicate that to the crew. Dispatchers had various means to communicate with the crew, like ACARS, which was their primary means, Jetcom (VHF) network domestically, Satcom on most airplanes, and HF radios on some airplanes. When asked if dispatchers were encouraged to contact crews on a regular basis, he said "not routinely." Generally they would only contact the crew if there was a weather or MEL issue.

Domestically, depending on the shift, a dispatcher could be working 15-25 flights, and may be flight following up to 15 flights. Internationally they would not have as many since it was more involved. For flight following, the dispatcher would be monitoring the flights while enroute. They used Flight Explorer to flight follow, and their flight planning system, the Lido system. Weather and NOTAMs primarily came from Lido during their flight planning process. Alternative sources included Flight Explorer, Aviation Sentry, WSI, but Lido planned the flight and created the weather and NOTAMS included in the dispatch briefing package. Lido built the briefing package, and it was generated automatically. The dispatcher would build the flight plan, and the software assembled the weather and appended it to the briefing package. The paperwork then sent the file to store the flight plan information, which was usually 90 minutes before departure domestically. The weather may be a little dated, and the METARs were included in the briefing package. Remarks were not included in those METARs. When asked why, he said he was not sure, and the decision for their removal was "above our heads." He said pilots could pull up weather and request remarks via the ACARs, and the flight planning system would, in some cases send METARs automatically to the airplane. The dispatcher would also check the weather as part of his duty. The dispatcher would use the flight planning system to send weather to the crew manually, as well as the inflight monitors displayed on a screen. When asked if the remarks on METAR were included in that weather information sent to the crew, he said he was not sure.

When asked if a dispatcher would know that a crew had requested weather while enroute, he said not really, and the dispatcher would have to being looking it. There was a pop up window, but it was filtered to keep the dispatcher from getting inundated, and weather request from the crews was not a part of that pop up notification. He could look into the message review, and filter from uplink or downlink messages, but that was not a typical function for the dispatcher since they got thousands of messages, including position reports that came in for each flight every 8 minutes.

Dispatchers could look at approach charts for a destination, and they generally looked at the ones they were interested in. That was part of their responsibility. It was not a procedure to look at every approach chart for the airport. The dispatcher would have to determine if the approach was available. When asked if the dispatcher saw an approach chart that was illegal or not available would they be required to inform the crew, he said no. The dispatcher looked at the available approaches to make a determination if they could release a flight to that airport. The dispatcher had to keep the pilot informed of anything affecting safety for a flight. If there was a navigational outage, that information was available to the crew. If the dispatcher saw that there was at least one approach to an airport that could be used, he could release the flight to that airport.

UPS dispatchers had the operational authority to delay a flight, and it could be for a number of reasons like maintenance issues, or weather. If a dispatcher could not determine that the airport was available, he could end up delaying the flight. This did not happen every day.

After OJT training, it was three tests the dispatcher took; the oral, written and practical. He was not exactly sure since he did not administer those tests. Dispatchers trained on route familiarization with the flight crews. When asked if, in training, there were ever scenarios given that were in a grey area as to whether or not to contact the crew, he said most of the scenarios were not that obvious.

When asked if the Lido system dispatched to an airport or to a particular runway, he said the flight planning system dispatched to an airport but looked at a specific runway. It also would read the NOTAMs for runway closures. The flight planning system was originally designed to be fully automatic. The system would pick a runway based on the conditions. The flight dispatcher, after reviewing the weather and NOTAMs, would make the determination on the legality of the dispatch. The Lido system would generate the runway that was included in the flight briefing package. They based their performance information on the runway.

When asked if there was an overall reliance on automation, he said it was an issue, and to deal with it they had inhibited some of the automation to deal with that. The briefing package was automatic, but they would have to build the runway selection, even though it was built automatically at first. He said if you rely on the automation, you start to lose some of the things that got you there. He said for the most part they try to work around the automation.

The interview concluded at 1335.

3.0 Interviewee: Warren Leggett, UPS B747 Captain

Date: January 28, 2014
Location: via phone
Time: 1430EST
Present: David Lawrence, Katherine Wilson - NTSB; Larry Ashby - UPS; Drew Middleton, IPA; Normand Bissonnette –FAA.

Capt. Leggett was represented by Kathy Yodice, Law Office of Yodice Associates.

During the interview, Capt. Leggett stated the following:

His full name was James Warren Leggett and he was 45 years old. He was a B747 captain based in ANC, the IPA representative for the ASAP process, and a sitting ERC member. He was currently out on medical leave due to a back injury. His date of hire was February 2, 1998.

He was hired as a B747 flight engineer in 1998, then went to the training department as an FE instructor in the simulator and IOE on the line. He was on the B747 from 1998 until 2001. He went to the Airbus from 2001 until 2008, first as a line first officer and FBS instructor and then upgraded to captain. He was displaced to the right seat of the B757/767 flying internationally then as an FBS instructor. He went back to the B747 as a captain in 2008. Outside from UPS, he did some research for NASA on the -400 program with regards to the next generation concept at Moffett Field. He was a fleet representative for IPA on the 747, A300, and B757/767, and was the TEM/human factors training committee chairman for about 3 years in the mid-2000s. He also communicated with the FAA liaison communicating with them on training issues or concerns from IPA's perspective. Prior to UPS he was primarily doing corporate flying and flew for American Eagle from 1992-1994. He started flying when he was 13 years old. He got his first job out of high school flying the Hawker and Falcon 10.

He did not know the accident FO but he knew the accident captain for quite a while. They initially met when he was an instructor and the accident captain came to the Airbus as an FO. The accident captain lived in Charlotte and North Carolina was Capt. Leggett's home state. He would bring an airplane into the sort as an FO for the accident captain. He knew the accident captain from the training aspect and they also had a cordial relationship in and out of the sort and whenever they would see each other.

Capt. Leggett trained the accident captain on the Airbus, prior to the accident captain moving to the left seat. He did a lot of his training as an FO. When the accident captain upgraded, Capt. Leggett was still "around" and wore many different hats, but the experiences that he recalled was when the accident captain was an FO.

The accident captain was a guy who was "the perfect student." He always showed up on time, was prepared, came in with questions, asked questions and listened thoroughly during the debrief and came to training with the "free" stuff. He knew the memory items, limitations, cockpit setup, profiles and procedures . He was a pleasant guy to be around and to work with.

Capt. Leggett never had to request any additional training modules for the accident captain. As an instructor, you remember those that are "aces of the base" and those that had to work a little bit harder. That was the category that he would put the accident captain in. When he worked with the accident captain, he met all of the qualifications as laid out in the training manuals but he had to work a little bit harder. There was not one particular thing that stood out. His situational awareness was something he remembered working with the accident captain on. The captain always made good decisions but maybe made them a little later in the training scenario. The accident captain did everything he could to be the best that he could. He never witnessed the

accident captain not go around when he should have but thought he might wait a little longer before recognizing the need to go around.

He never flew with the accident captain as a captain or FO; he worked with him as an instructor. As the IPA training committee chairman, he never worked with the accident captain. But in the capacity of an instructor, the accident captain came back to the training center for some additional training that focused on intervening when the automation was not working right. It stemmed from an event when the accident captain was an FO and was the PF coming into SDF. The automation did not join the 35R localizer and they did not intervene until it encroached the 35L localizer. They did additional training with both the captain and FO on that flight. He thought it was around 2005. Asked if an ASAP report was completed, he said he was not part of the ERC/ASAP at that time. They became aware of the event because of the jumpseater on the airplane.

Regarding any concerns he had about the accident captain's flying ability and PIC ability, he could not say specifically. When the accident captain left the training center, he was a qualified pilot. The accident captain was qualified based on the modules he had with Capt. Leggett. When Capt. Leggett heard about the crash and that the accident captain was involved, it did not surprise him. But at the same time, he had no foundation to say the accident captain was not qualified. He would put his family on an airplane with the accident captain. If he had had enough concerns about the accident captain's ability, he would have brought it forward.

He had no knowledge of the accident FO until after the accident. He had heard that she was not the 'Chuck Yeager' of the group but he had no personal knowledge of that. There was nothing that he did not already know about the accident captain that changed his opinion about him. He was a nice man and worked hard, but he had to work a little bit harder than other pilots. "It happened kind of fast flying a jet for him."

When the accident captain came to the Airbus as an FO and transitioned to the left seat, Capt. Leggett was totally unaware of the accident captain's two B757 upgrade attempts. Had he known that, he did not think he would have done his job any differently. He might have paid more attention to some things. Typically they did not want to have information that went back 5-6 years because it could affect your opinion or how you train. After the crash when speaking with the former training committee chairman, Joe Bell, he found out about the accident captain's upgrade attempts. His first attempt was with Chris Dabikeh. He was surprised to hear that the accident captain did not make it twice. Per the labor agreement with UPS, if a pilot did not pass on his first attempt he was locked out for a year, and was locked out for 5 years after his second attempt. What he knew about the accident captain's training history beyond when he instructed him was learned from other sources post-accident.

He trained the accident captain in the FBS which was a simulator without motion and this was a part of ground school. It was facilitated by an instructor and typically there would be a captain and an FO. He did not train the accident captain in the actual airplane. The only classroom environment where he would have had the accident captain was Cat 3 - TEM/CRM. The rest would have been in the briefing room, then in the simulator where it was motion on or motion off, then with the debrief.

Asked if the accident captain had a good grasp of CRM/TEM, he said from what he could tell, the accident captain was not a very evasive individual. He was very open and approachable. In terms of TEM, where he observed the accident captain faced with a threat, he had limited observations. He did not have any concerns at all. The accident captain was very approachable. He never flew line with him.

The flight from SDF to BHM was a quick flight. The majority of their repeat events and their events "back in the old days of failing checkrides" was the inability of the crews to manage the environment in setting up a nonprecision approach. That was why they had the guide. It was almost like a checklist. They also had guides for Cat II and III approaches because they were something that pilot did not do a lot of. Unless you were ahead of the jet and had briefing guide or did NPAs every night, that in and of itself was a huge threat.

Capt. Leggett had flown into BHM but he was not sure if he landed on runway 18. Flying into BHM was like flying into Raleigh, "they hold you up so you don't interfere with different people's airspace because they don't want to talk to you for 45 seconds." Going into BHM they hold you up high. If there was a remote chance of fatigue, "you have already stacked the deck against you."

Asked if the accident captain ever talked to him about his schedules, he said he would bring airplane in for the accident captain or would take it home on a Saturday morning. The accident captain had a real good schedule for a real long time flying as an FO out of Raleigh. Capt. Leggett was not sure when the Airbus went to Charlotte. But the accident captain enjoyed being home or being able to get home. They talked about that. And when Capt. Leggett would call him to talk about a fly no pay, they discussed that the accident captain's decision to move to the left seat was a quality of life issue. The A300 schedules were "the best kept secret in the world" and then UPS learned how to turn the airplane quicker and crews were now flying four legs a night. It was a tough schedule. Capt. Leggett said he could not do now at the age of 45 what he could do when he was 25 years old. The accident captain asked him what the schedule would be like if he moved to left seat from a quality of life issue. He would have reduced seniority. The accident captain did not feel that he had to upgrade or he would be kicked out. It was more a quality of life issue.

The accident captain never talked about changing aircraft and never talked about reporting for duty when not rested. The majority of the time he spent with the accident captain was in the training environment or when he would bring the airplane in for him or take it home. Capt. Leggett was involved with the training and safety aspect so the accident captain could have easily reached out to him. He never got that question at all.

He trained the accident captain, he was pretty sure he was in the training department when he transitioned to the left seat and he was definitely there when the captain came to the A300.

Under the FOTM, there were no repercussions for doing extra training events. Under AQPM, it was difficult for him as an instructor if you saw a problem and could not intervene until the

student got to a checking event. The student might pass or not. It was a way of validating the training. He did not think he worked with the accident captain under AQPM.

The accident captain was prepared and had all the free stuff so he could concentrate on the stuff he had to work harder at. He had to work harder at CRM and stick and rudder. As far as CRM, the accident captain was very approachable and always very open. From the human factors standpoint, they know now it was a monumental part of the job they did. It was easy to discuss the two separately, but when you put the two together, that was where the dynamics occurred. Capt. Leggett felt that he could train anyone to proficiency on a maneuver with enough practice sessions. However, when they added in the human factors piece that was where the challenges occurred. The accident captain was a good pilot and had good stick and rudder skills. But when you added in factors like time compression, that was what separated the A+ students from the C- students. He did not have to talk with the next instructor about the accident captain any more than a normal pass-over of a student. Under the FOTM, there were only two validation gates – the checkrides and orals. Under AQPM, there were four validation gates that were more specific to JTAs, as well as other validation gates out on the line.

When the accident captain left the training center he was equally as qualified as any other captain on the Airbus. He would classify the accident captain as a C- pilot but that did not make him necessarily any worse than an A+ pilot because a pilot was qualified or not qualified.

He talked to the accident captain outside of the training department. He never just talked to the accident captain about his personal life. Their conversations coincided with a fly no pay. The topic came up about whether Capt. Leggett thought it the accident captain should move to the left seat. He thought it was a quality of life issue. They would speak in the sort when they saw each other. He had seen the accident captain rubbing his face trying to wake up but that was no different than what he saw any pilot do when doing a night sort; it was a tough schedule.

He did not know anything about the accident captain's family but knew of the pride he had for his family. He spoke with the accident captain's wife when he would call about flight no pay about whether it was a good time for her husband to upgrade to captain. Capt. Leggett looked at it from a schedule perspective. He was not aware of the captain's previous failures and was not sure if he would have answered any questions differently. Because of his position in the training center, he had spoken to other wives about their spouses upgrading.

He had not heard of any other events involving the accident captain in the A300 beyond when they violated the localizer.

When flying on the backside of the clock, it was absolutely incumbent that the legislation and regulations to give the pilot groups every possibly tool in their bag of tricks to conduct and routinely operate big jets throughout the world. He did not know if it would have made a difference on the accident flight but he thought it would prevent other accidents. At the same time, there was a level of professionalism that the pilot themselves had to take.

He felt that UPS had pilots routinely checked and supervised by management pilots that had no experience and therefore no credibility, so there seemed to be a loss of checks and balances in their own organization. He felt there was something wrong with this process.

The interview concluded at 1535.