Docket No. SA-532

Exhibit No. 2-C

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Operations/Human Performance Group Chairmen
Interview Summary – US Airways Fleet Captain and Director of
Airbus A319/A320/A321 and A330 Program

(9 Pages)

Attachment 2

to Operations / Human Performance Group Factual Report

DCA09MA026

INTERVIEW WITH US AIRWAYS FLEET CAPTAIN

Interview: John P. Hope, Fleet Captain and Director of Airbus A319/320/321 and A330 Program - US Airways
Interview date: January 21, 2009
Time: 1100
Location: US Airways Training Facility, Charlotte, NC

Present were: David Helson, Katherine Wilson - National Transportation Safety Board (NTSB); Lori Cline – US Airways; Larry Rooney – US Airline Pilots Association (USAPA), Ricky Daniel – Federal Aviation Administration (FAA); Philippe Boscardin (BEA).

Captain Hope was represented by Dane Jaques (US Airways Legal)

In the interview Captain Hope stated the following:

He was 50 years old. He was employed with US Airways as the Fleet Captain and Director of the Airbus A319/320/321 and A330 program since November 2007. He had been with US Airways since May of 1985. He graduated from Embry Riddle with a BS in Aeronautical Science in 1980 and held ratings as a CFI, CFII, and Multi Engine Instructor. He said he instructed in Hartford, CT for two years.

He instructed and flew FAR part 135 air taxi in every twin engine Cessna made but did not fly their turbo props. He went to work at Stanley Works Corporation (a tool company) where he flew a Merlin 3b with Garret 331 engines and then went to work for Pennsylvania Airlines in Harrisburg, PA for 13 months. He was then hired by US Air as a First Officer in the BAC-111, DC9, MD80, B737, and as a Captain on B737 for 4 years. He said after an interview he was invited into the training department and became a check airman on the B-737 in PIT. He did that for 2-3 years and then wrote much of the curriculum. He was invited into "the AQP world" where he started moving it out of philosophy into the classroom and into the simulator.

In late 1997, he was asked to work directly in developing the Airbus program at US Airways. He received training from the manufacturer in January 1998 at the Airbus facility in Miami and co-wrote the ground school. He then went to Air Canada facilities in Toronto because the program at US Airways was still being built. He worked with a team to build the simulator course at US Airways and all instructor and line pilot training, before getting their first A320 in October 1998. Then he was asked to be a senior check airman where he interviewed and built a staff of check airmen. He was in charge of all the Airbus training until November 2007 at which point they asked him to be the Fleet Captain.

He said he still flew the Airbus and had logged about 14,000 hours total time. He said he had about 2,000-3,000 hours in the A320. He oversaw the A330 but did not fly it; he had two senior Check Airman that took care of the A330. He said it was important to keep the procedures very close between the A320 and A330 because of cross crew qualification. He stated he flew once a month, usually with a senior or standards check

airman. He said since he had taken over as Fleet Captain with two Training facilities in two cities, he had three simulators in PHX and five simulators in CLT and had taken delivery of many new training devices and new enhanced aircraft. That made it difficult to keep up with flying but he said that he did get into the simulator to fly monthly.

When asked if he could describe the process for how he evaluated items and events to be trained in the A320, he stated it was important to note that Volumes 1, 2 and 3, laid out their philosophy of how they train and evaluate. He said Volume 1 laid out their philosophies. Volume 2 was task analysis and qualification standards, and was similar to the Practical Test Guide under 121. He said Volume 3 included the curriculums of all fleets, basically "the old FOTM in 121 training". He said they must abide by the training in those volumes but there were cycles that identified where they would rotate a lot of their curriculum.

He said they evaluated the curriculum at the end of ground school. He said typically the 121 oral was an SPV, or systems procedures validation. He said years ago when they first learned about the Airbus they decided they could not just teach systems, they needed to teach pilots how to "fly it not build it".

He said during ground school, the first half of the day was lectures and CBT, and the second half of the day the crews were put in procedural trainers. He made one note about their procedures and said towards the end of ground school it was very scenario based, for example they would take off with all their documentation and then they would get a reroute. He said they could also give a non-normal. He said the pilots were taught philosophies in non-normal procedures long before they got in the simulator.

He said having looked at that and how they did their business, they looked to see what they could take out of their simulators and put into procedural trainers. He said they were constantly evaluating it. He said they had new IPTs (Integrated Procedures Trainers) and the potential of those was to offload the simulators so the simulators could be used for more scenario-based simulations. He said the first evaluation of the pilot was the SPV.

He stated under the AQP footprint for full flight simulators, the first 4 days was all procedural, procedures and maneuvers, which were SPOT based, and day five was the MV or Maneuvers Validation. He said Day 6 was more SPOTS geared mainly towards pressurization problems at high altitudes. He said Day 7 was non-normals focused on electrical and day 8 was mainly hydraulics and dual hydraulic malfunctions; he said this was very similar to the Boeing course and how they were designed. He said the difference was that in Day 7 and 8 they introduced the scenario-based mini LOFTs, and Day 9 was all LOFT with two different legs with many different triggers to select from. He said this was preparation for LOE. He said the LOE would be the type rating day then the OE.

He stated that much of what was determined to be trained was already set in Volume 3 and the systems were taught in ground school. He said even in the Qualification programs it was all outlined.

When asked what the process was to get items into the curriculum, he stated he went to the manager of AQP to suggest there was an issue that was an industry concern, from the manufacturer to the operators, and within the different engineers at US Airways. He said as far as their continuing qualification training, they would import the concerns and needs. He said they did not go anywhere without the FAA so they showed the data and concerns to the FAA and identified that something had to come out if something went in. He said they worked together in committees and groups first at a higher level, then it went down to his curriculum committee based on what the requirements from Volume 1 and 2 were as to what they had to accomplish.

When asked if there were conventional training requirements he stated yes, that the FAA set requirements in the AQP program and that there was an hourly requirement.

He stated it was the one transition AQP had not made yet. They designed AQP to be "Train to Proficiency" but it still had the same basic hourly requirements that came from the old 121. He said it was still very very new compared to dating back into the 1940's. He said the criteria of maneuvers to be accomplished in training were established in 1958. He said they had been adding to that list ever since and AQP allowed them to do some rotation of those systems. He said the hourly requirement was just one aspect that had not been adjusted in the new process. In regards to the hourly requirements of part 121, he said US Airways used the same requirements. He stated they started off the same as 121, exactly the same amount of time. They started under 121 in 1998 and did not transfer to AQP until 2002 so they kept everything the same as 121 and they filled the volumes 1, 2, and 3 with the documentation to suffice for the AFS 230 and for the FAA.

He said US Airways hourly requirements were not at minimums but he thought they were at the industry standards for operators in North America. He said to simplify their training, US Airways tasked their pilots more with electronic tools like the VSIM, which was an upgraded product compared to what was used before.

Regarding the process for adding items to the curriculum, he stated the primary source of information was Airbus as US Airways procedures came from Airbus and mirrored their procedures. He said it normally started with a Telex, then a Service Bulletin, and an AD that came from the FAA. He said he received all service bulletins and AD's for the airplane. He said close to 90% of them came for maintenance and had no Flight Operations impact but they looked at everything just in case. He also worked with many engineers at US Airways, especially electronics engineers. He said the Airbus was an electronic airplane and the manufacturers and vendors were constantly updating the systems. He also worked closely with Northwest Airlines before they implemented a new Flight Management System because he had to train the pilots before they could implement the change from Honeywell FMS to Thales FMS. He said his training devices needed to be upgraded to train it.

He said training was continually evolving and he felt a person was not an educator if they did not think that way. He said the input should not be opinionated, it should be data

driven. The data came from many different sources, first and most important was the line pilots, who were given a critique form in CQT. He said he read each and every one. He said many had questions or wanted a call back that was why he had to review them. He said he assigned them to his staff to call the person, get a report and understand what their concerns were. In Qualification training, they had the same critique form but they were here for a number of weeks and they usually got their questions resolved. He did not normally get as much feedback from Qualification because they were here for 45 - 55 days and they worked out their issues; he did hear a lot about the cafeteria food. The next source was their Check Airmen's comments. He had a Senior Check Airman in both facilities on the A320 and on the A330 and each had two Standards Check Airmen. He said their job was to deal with Standards in that program.

He said on the A320 they also had a Pilot Enhancement Program or PEP, they called them their "PEP Boys", and their job was to go out and observe a minimum of two unannounced observations each year. He said they kept a small core of them who conduct IECQT (Instructor Evaluator Continuing Qualification Training). He said those gentlemen met with his staff every month and he had a monthly Airbus staff meeting. He said along with the Standards side of the house, he had a planning side that designed curriculum, and dealt with manuals and updates. It was their job to talk amongst themselves and bring him the issues and standards items.

He also had subject matter experts available in each facility. He said the whole staff had cellphones and could accept calls from instructors and evaluators. He said he would get called about any issue with a student. He said they had an "open door policy" because he needed to know; otherwise he could not fix it. In addition to the pilot and the Check Airman input, they had Departmental Standards meeting 3 times a year where they gathered 3 months of standards issues, with answers and gave them back to the staff, and they held two meetings in case someone was in training or on vacation. When the Staff came in, part of the meeting covered standards issues. They also introduced new information and curriculum so their meetings in March and April would all be about their new CQT which started May 1st. It was another method of not only gathering standards issues but also getting information on manuals and curriculum back to the staff.

He stated they trained for dual engine failures in T6. He said they also got into engine failures throughout training in T2, T3 and T4. He said regarding dual engine failures, they went through the QRH not only in a briefing scenario but also with Instructor Tools, a PowerPoint led script followed by the Instructors/Evaluators. He said they script everything because it was important for standardization that no one went off doing something on their own.

He said they reviewed the entire QRH on dual engine failure then they took them to the simulator, where they did not take it to a landing because they got one engine started during the scenario.

As for the type of training provided for ditching, he stated that it simply was done when pilots were first hired and he believed it was called GOSS, or airplane non-specific

training. He said there were training modules there the first day of ground school and that was where they went through ditching procedures in conjunction with touching the emergency equipment and doors in a classroom environment. He said they got more into evacuations in the simulators rather than ditching. He said there was the problem with going into ditching in the simulator in that even though it was a brand new simulator, that if they did not land on a runway, they could lose 20 -30 minutes with resets, and he said the older ones took even longer.

As for Bird strikes, he had looked back and saw it was aircraft non specific. He said he had not looked but normally that would be taught in Distance Learning. He said they did not teach anything specific to Airbus on bird strikes.

He stated that they did not yet have any training for compressor stalls, but due to the heightened awareness and as a result of the AD that came out on December 31, 2008, the CQT will and they will probably drive that back into Qualification training as well. He thought back in 2004 or 2005 they did some. While the industry had not had a problem, they were looking for another variance for engine problems for V_1 or V_2, and they were looking for more. He said Airbus did not call it a compressor stall; Airbus called it an engine stall. He said compressor stall was a Boeing term.

If they looked at the other Airbus operators, they were up against the same thing with the difference in terminology, with the good rich Boeing history it was their job to take them out of the classic airplane and put them into automated airplanes.

He stated that training in CRM was incorporated into everything they did. He said he thought they had gone way beyond the CRM module that was taught years ago. He said they trained it from ground school through OE. He said they called it Threat and Error Management and it was built on two simple philosophies. They used an icon, a simple bull's eye that was green, yellow and red. He said CRM was designed to get crews to talk to each other. In the past they taught them great skill and knowledge but they did not teach them good communication skills.

The Threat and Error Management was built on a simple philosophy that allowed pilots to say; "I'm no longer in the green", where green was good, maybe they felt they were in the yellow. In other words, he said they did not feel comfortable and it developed a way for two professionals to tell each other how they felt about something. He said simple non-normals could take a pilot from green straight to red. He said they had been trained for years that a V_1 cut at takeoff would do that. He said the issue was what tools a crew employed to get back into the green. He said there were some non-normals where you may not be able to get back to the green, maybe you could get close but still be in the yellow.

The other portion of the Threat and Error Management was the ABCs; A referred to assess the threats. For example using crew briefings, he said in order to avoid inadvertent slide deployments, he was about to put out a memo to crews telling them to include in the crew briefings "don't open doors from inside". B referred to maximizing your barriers.

Barriers were policies, procedures, flows, checklists, automation, communication, human factors and knowledge of aircraft handling. Each pilot had a set of barriers to prevent errors. A barrier was something known to block an error early on. C referred to communication; effective communication and understanding callouts was the most important thing when people communicate with each other. The last thing in the ABC's was the S for SOP's (Standard Operating Procedures). He said US Airways used flows that were set by triggers and what had to be accomplished by flows they practiced. He said they practiced the flows all the way through ground school, flight and in OE.

Captain Hope said there were four posters put in every briefing room that they used to debrief and they worked hard to get their pilots to understand the concept of Threat and Error Management and to get the instructors to utilize it in their debriefings. He said the debriefing was the most valuable portion of the training to make sure the pilots walked away with even higher levels of understanding and hopefully, correlation.

He said every year the check airmen came in for a one on one evaluation with the Fleet Captain. He said he looked at the forms filled out during their observations and he wrote an annual evaluation for each check airman. He said the check airman also attended an annual course called BCAT, which was a 4 hour course identified in the volumes of AQP, that addressed certain items and anything new that came from CRM. He said an example of what they learned there was facilitation. The BCAT course was where they originally taught their Check Airman to utilize facilitation in their debriefing. He said they tried to utilize debriefing in everything they did and included it in their OE. He said they encouraged the check airmen to find time in OE to include the debrief.

Regarding feedback he received, he said pilots did not write him very often but when they did, he responded right away. He said he talked to the Operational Control Bridge "all the time" and if there was an issue, he wanted to know about it. He said crews could reach him anytime through dispatch. He said he had been in contact with crews prior to coast out working with them on an issue. He said it was a summarizing of what was going on in the environment and listening to the customer. He said he was not able to attend every recurrent class in PHX or CLT but if he was not there he had a representative there to listen to the pilots and talk with them. He said they had a briefing for the pilots that included a PowerPoint presentation from the Fleet Captain letting them know what was new, what was going on, and allowed time to answer their questions.

He could not recall what the part 121 hourly requirements were for training. He thought it might be 90-91 hours for ground school with a 10-day footprint in the simulator, but they were the same for AQP. He said it included 15 hours OE for an FO and 25 hours OE for a captain. All of those parameters had been met and had not been changed under AQP.

He stated that if he wanted to add something to the training program he would go to the Manager of AQP and tell him that he had a requirement to teach an item, ditching for example. He said that requirement could have come from something they wanted to add, or it could have come from the FAA if they had told us to do something, and then we

incorporated it. He said the biggest problem was time; they had to look to see where they could teach it and how they would teach it. He said he would go to his staff and ask them "how and where do we do this". He said he had a gentleman in charge of simulators and he would talk about the impact there and he would go to his curriculum committee who designed it. In addition, he looked at Airbus to see how they did it. After collecting all of the information, he went back to the Manager of AQP and told him how and where they wanted to teach it. He also went to other operators to see how they taught it. He added that they had to be careful going to operators outside the US because they were governed by different rules.

Captain Hope said the hard part was determining what could come out of the training to put something new in. He said generally, there were things that they had to do that they could not take out. He said they would look at cycles. For example, CAT III was required and one cycle they did to a landing and the next cycle was to a go around. He could not pull those things out but he could look at ground school and see if it could be taught there. He said if a module was not effective, they would look at increasing that module. He said sometimes they had a module to address a concern that had been fixed and then it could come out. He said they would have to do an audit of the entire program to see what could come out. He said they did audits of the program and sometimes an item had high focus and then later it did not because the particular problem had gone away. He said that was the dynamics of AQP. It allowed them to pull some of those things out and allowed them to change the curriculum to focus on high threat type issues instead of just adding to an on going list.

He said when they first came out with EIS airplanes; one of the concerns was "what if the displays go away". He said three out of the six displays had been lost 49 times on A320's worldwide; two of them had been at US Airways. He said there was still not an AD on that issue. He said they investigated it with Airbus to see what the problem was and to see if he could train it in the simulator and he could not. He said one of the requirements from the NTSB was to train it so he did it as an immediate action item. He said US Airways also put in a memory item that basically said they would go to the AC ESS bus and turn it on. He said when the NTSB wrote that this needed to be addressed; the US Airways Corporate Safety came to him and asked how they were going to address it. He said his corrective action was to develop an immediate action item, a memory item and in addition, he took another step and retrofitted every simulator so it could emulate the fault. This took place in October 2008. He said he had first heard about this issue in July or August 2008. He alerted all pilots using the CBS / Read File and told them about it and what to do and then within 3 – 4 months they had the procedure. They had been watching that issue, it was primarily overseas but the minute it happened at US Airways, he reacted.

When asked how they knew the training was effective he stated he had close to 150 people on his staff and it was very important that he heard from them but AQP was data driven. From every Check Airman and Instructor through the courses they take their data collection right back into the Threat and Error Model. He said they had a grading scale of 1 – 5. 1 was unsatisfactory, 5 meant no errors. A grade of 4 meant there were errors

that were caught by the crew. One pilot committed an error and the other pilot caught it. They focused with Check Airmen, on their observation skills, to be observing their student's behavior in this SPOT and not how they run the IOS. A grade of 3 meant errors were committed and not caught, but there was not an impact on safety and they would debrief that item. A grade of 2 was an error that was committed, that neither pilot caught, that impacted safety. A grade of 2 or 1 was below satisfactory level and a grade of 2 had to be repeated. Volume 1 of AQP included the rules of AQP and described what could be repeated and how many times. That was part of AFS-230 in Washington. A grade of 1 meant neither pilot caught it and even repeating it was not going to fix the problem or error, so it was truly unsatisfactory and was going to take more than just a repeat.

He stated they collected all of that data and at the end of the year, the cycle ended in June, they went to the FAA in July with the ERT (extended Review Team) and gave them all the parameters. He said they only had to give them 10% of the data but they gave them all of the data because of their relationship. It was all de-identified data except when they had a sub-sat. They looked at that data and looked to see how they could implement change. He said when it was all data driven it was easy because everyone saw that data. He said it was important to give that feedback back to the check airmen and instructors so they understood that the information did not just go into a black hole.

Captain Hope said instructor and evaluator grading was identifiable to him, and during the yearly review he would say; "hey why haven't you given anything less than a 4." He said once they determined that the first year, they started to use the entire grading scale. He said it was quite easy if it was unsatisfactory to the staff; they want them to report more 2s and 3s. It was important to the management and staff to let the instructors and evaluators know they were watching.

Comments were encouraged but not required. If there was a grade of 1, 2, or 3 given, the software they used to record the grades automatically asked for more comments. He said anytime they had to debrief a 2 or a 3, the software required a comment. The choices were based on the Threat and Error Management and why the instructor thought the crew made the errors. In the software, they chose whether the error was caused by checklists, call outs, or other reasons based on the documentation in the LOE or OE and what threats were involved. He said the comment window was bracketed by seven different sections. Each section was broken down into as many as 10 different items to choose from to identify how an error was made.

He stated as for the A330, they had one flight to San Juan, Puerto Rico, but the majority of the fleet went to Europe. He said that they did cross crew qualification but had no plans to utilize mixed fleet flying.

Captain Hope said that after an instructor debriefed a student, and the student had left, the instructor went to the software to do the grading. He said for example, if they did an engine failure the instructor graded from 1 – 5. If the grade was a 1, 2, or a 3 the software brought up additional barriers to select where the crew had failed in their barriers. He said there were six or seven barriers and each one was broken down into 10

– 15 items the instructor selected. If the instructor did not find something on that list, there was a place at the bottom of the sheet where they could type in comments.

The documentation turned in by the instructor was not required to include any justification for a passing grade. If the student was not recommended or had failed, that information was reported to Captain Hope in a Student Irregularity Report. He needed communication between different instructors. He said the Student Irregularity form was really a communication form to advise the next instructor what he needed to prepare for.

Captain Hope said he did not know Captain Sullenberger or FO Skiles.

The interview ended at 1213.