

Addendum 3

to Operations Group Chairman's Factual Report - 2

DCA94MA076

submitted
June 19, 1997

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

June 19, 1997

**THIRD ADDENDUM TO OPERATIONAL FACTORS GROUP CHAIRMAN'S FACTUAL
REPORT OF INVESTIGATION**

DCA94MA076

A. ACCIDENT

Operator: US Airways, Inc. (formerly USAir, Inc.)
Location: Aliquippa, Pennsylvania
Date: September 8, 1994
Time: About 1904 Eastern Daylight Time
Airplane: Boeing 737-300, N513AU

B. OPERATIONS GROUP

Chairman: Benjamin A. Berman
Senior Air Safety Investigator, Air Carrier Operations (AS-30)
National Transportation Safety Board
Washington, DC 20594

Members: Matthew Schack
Principal Operations Inspector
Federal Aviation Administration, FSDO-19
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Jim Barnette
Base Manager-Baltimore
US Airways, Inc.
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John M. Brookman
Accident Investigator
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C. ADDENDA

1. Operations Group Activities

The operations group resumed activities in September 1996 for the purposes of (1) acquainting the newly-appointed group chairman with the factual material previously obtained by the group under the leadership of the former chairman, who had retired; and (2) auditing the group's previous activities and written products.

On September 16, 1996, the group reconvened in Washington, D.C. All parties to the investigation were invited to participate in this activity. The following parties sent representatives to the meeting who agreed to participate in the group's activities until released by the chairman: the Federal Aviation Administration (FAA), US Airways, Inc., Airline Pilots Association (ALPA), and Boeing Commercial Airplane Group.

The chairman and members listed in section B comprised the operational factors group as of September 16, 1996. Captain Brookman was the only member of the original group who was able to participate in the current group. The following members of the original group also attended the meeting on September 16-17: David W. Baughman (US Airways), Joseph Lofaso (US Airways), and Joe Reynolds (US Airways Dispatcher, representing the Transport Workers Union). Chris MacWhorter (FAA), another member of the original group, participated on September 17. These additional members of the original operations group were interviewed by the current operations group about previous activities of the group, and they assisted with the audit. They were released at the conclusion of activities on September 17.

2. Audit of the previous activities of the operations group

Members of the original group recalled that the training records, personnel records, and FAA certification records of the accident captain and first officer had been examined by the entire group during the field investigation. During their review of these training records, the original group members had discussed the accident captain's extra training session and the written comment of a check airman that the accident captain was in the "lower 10 percent" of US Airways pilots. At that time, it was the group's consensus that these training file elements were insignificant and should not be cited in the group's written products.

The original group members recalled that they were provided field notes in draft form by Mr. Charles Leonard, who was the group chairman during the field investigation. Subsequently, followup interviews were conducted by the original operations group in Pittsburgh and Chicago during the autumn of 1994.

The participants in the September 16-17, 1996 meeting performed a paragraph-by-paragraph audit of all operations group field notes, factual reports, and factual report addenda published to date. The following documents were reviewed:

Operations Group Chairman's Field Notes (dated 9/14/94)
Group Chairman's Factual Report of Investigation (10/27/94)
Addendum to Operations Group Chairman's Factual Report, United Airlines
Advanced Maneuvers Package (11/22/94)
Addendum #2 to the Operations Group Chairman's Factual Report of
Investigation, Interviews with USAir Maintenance Personnel and
Passengers: Reference Airplane Noise (12/1/94)
Passenger Interview Summary (12/1/94)
Addendum to Exhibit No. 2M, Passenger Interview Summary (1/18/95)
Change to Operations Group Chairman's Factual Report, Page 16, Proficiency
Check Results (1/19/95)
Summary of Captain Peter Germano's U.S. Air Force (USAF) and Braniff
Airways Records (4/28/95)

Based on a review of these materials, the members of the original group agreed that all of their on-scene activities were reflected in the field notes, and that they had received drafts of the operations group factual report and addenda from Mr. Leonard for their review and comments.

The participants also reviewed the attachments to the original operations group chairman's factual report, which had been prepared by Mr. Leonard prior to his retirement but never distributed to the operations group members of parties to the investigation. These were labeled by Mr. Leonard as appendices A through Q, and are attached to this report using the same labels. The participants noted that pages were missing from appendices C, J, L, and N, as a result of a previous failure to copy the reverse side of double-sided material.

During the September 16-17 meeting, members of the original group recalled that Mr. Leonard had distributed materials he obtained during a visit to the United Airlines advanced maneuvers training program, but they had not been invited to accompany him on that visit. Also, Mr. Leonard had informed the group that he would be investigating the accident pilots' backgrounds prior to their employment at US Airways (under the auspices of the human performance group), and operations group members were not asked to participate. Further, references to the cockpit voice recorder (CVR) transcript that were included in the operations group factual report were not coordinated as a group activity. Finally, all participants in the September 16-17, 1996, activities agreed that the statement on page 4 of the operations group factual report, "Conversation within the cockpit was routine and included an appropriate checklist reading," was an analytical statement.

With the exception of the preceding items, the members of the original operations group agreed that the activities of their group had been completely and fairly reflected in the group factual report and addenda. Further, they agreed that no activities were conducted by Mr. Leonard without group participation, except as noted above.

According to Dr. Malcolm Brenner, Human Performance Group Chairman, Mr. Leonard obtained additional factual material about the accident pilots' backgrounds prior to employment at US Airways at the request of Dr. Brenner, while Leonard had served as a member of the human performance group. Participants in the September 16-17, 1996 operations group meeting reviewed relevant portions of the human performance factual reports and addenda. The following documents were reviewed by the members of the current and original operations groups:

- Human Performance Group, Operations Sub-Group Field Report (dated 9/16/94)
- Human Performance Group, Operations Sub-Group, Sub-Group Chairman's Factual Report of Investigation (10/31/94)
- Human Performance Group, Group Chairman's Factual Report of Investigation, Addendum (12/14/94)
- Human Performance Group, Group Chairman's Factual Report of Investigation, Second Addendum (10/5/95)
- Human Performance Group, Group Chairman's Factual Report of Investigation, Third Addendum (10/27/95)

Dr. Brenner identified the portions of these reports in which Mr. Leonard had participated, which included factual material related to the background experience of the accident flightcrew. Based on a review of these portions of the human performance reports, the members of the original operations group stated that they had not participated in the development of this material.

3. Requirements Statement for Operations Group Activities

Based on its audit of the previous activities of the Operations Group, the current Operations Group developed the following requirements for its activities:

1. *Group Activities/Information to be Obtained:*

- * Obtain US Airways manuals: 1994 B-737 handbook and Flight Operations Manual; current Flight Operations Training Manual, check airman manual, and applicable manual sections on yaw damper malfunction, flap speeds, transfer of control, departure control (boarding) procedures for lap children (passenger service manual). (Excerpts from some of these manuals are provided in attachments R, S and Y.)
- * Review training records files for Captain Germano and First Officer Emmett. (The training events included in these files are summarized in section 4 of this report. Excerpts are provided in attachments T and U.)
- * Interview training personnel about the maintenance of paper records; computer data entries to comment fields; training records of unsatisfactory performance, redone maneuvers, and extra training; and changes in policy regarding reduced initial operating experience. (Summaries of these interviews are

provided in section 5 of this report. Excerpts from the USAir Pilot Records Computerized System Procedures Manual are provided in attachment V.)

- * Review Special Events Training and aircraft handling in the US Airways B-737 training simulator.
- * Obtain Boeing 7-13-93 "Flight Operations Review" (This was previously issued as Exhibit 2R in Safety Board docket SA-510.)
- * Interview Captain Mike Rush and his manager as a check airman (summarized in section 5 of this report.)
- * Interview appropriate personnel about departure control procedures for lap children (summarized in section 5 of this report.)
- * Obtain US Airways data on frequency of redone maneuvers during proficiency checks (see attachment W.)
- * Obtain all issues of US Airways Safety Online Magazine and 737/300 newsletter (excerpted in attachment X.)
- * Obtain original FAA data request by NTSB Operations Group (see section 6 of this report.)
- * Obtain FAA reports or documentation of FAA special inspections of US Airways (see section 6 of this report.)
- * Obtain NTSB Human Performance Group notes on the investigation trip to Chicago that involved ramp and customer service agent interviews. (These notes were obtained and reviewed by the operations group.)
- * Obtain or reconstruct Operations Group notes of trip to Chicago that involved interviews of mechanics and service agents. (These notes were obtained and reviewed by the operations group.)

2. *Audit of the following activities performed alone by the previous Operations Group Chairman (see section 7):*

- Survey of other airlines' PC pass/fail rates.
- Survey of other airlines' transfer of control SOPs.
- Survey of other airlines' SET-type training programs.
- FAA FSDO-19 ratio of inspectors to US Airways airplanes, compared to ratio at CMUs assigned to other airlines' certificates.

- * USAF background-Germano
- Braniff background-Germano
- * Logbook review-Emmett
- * Delta pilot interview about horizon references.
- * Aerobatic experience: Germano, Emmett
- * References to CVR transcript in Operations Group Chairman's Factual Report.

4. Training records summary

The Operations Group compiled the following summaries of US Airways training records for the accident crew:

The Captain

| <u>Date</u> | <u>Event/ "Comments"</u> | <u>Time</u> | <u>Result</u> |
|-------------|--|-------------|---------------|
| 2/4/81 | Date of hire, US Airways | | |
| 2/10/81 | Completed basic indoctrination as S/O | 40:00 | |
| 2/15/81 | Completed B-727 S/O ground training | 30:00 | |
| 2/26/81 | Completed B-727 simulator training | 4:00 | |
| 2/27/81 | B-727 simulator check | 2:00 | SAT |
| 3/4/81 | Completed B-727 S/O IOE & line check | 13:48 | SAT |
| 7/13/81 | B-727 S/O recurrent line check | 2:00 | SAT |
| 10/21/81 | B-727 S/O recurrent line check | 0:58 | SAT |
| 1/7/82 | S/O probation proficiency check | 2:00 | SAT |
| 3/16/82 | B-727 S/O recurrent line check | 0:56 | SAT |
| 3/30/82 | B-727 S/O recurrent ground school | 15:00 | |
| 8/18/82 | B-727 S/O line check | 2:01 | SAT |
| 10/19/82 | Completed BAC-111 F/O initial ground school | 80:00 | |
| 10/25/82 | Pilot Upgrade & Continuous Exposure training | 3:30 | |
| | "Very consistent and smooth pilot" | | |
| 11/4/82 | Completed BAC-111 F/O simulator training | 24:00 | |
| 11/5/82 | BAC-111 F/O simulator check | 1:50 | SAT |
| 11/7/82 | BAC-111 F/O aircraft training | 3:49 | |
| | "Required extra aircraft training due to the fact that he has not flown during past 4 or 5 years any aircraft" | | |
| 11/7/82 | BAC-111 F/O aircraft proficiency check | 0:45 | SAT |
| 11/18/82 | Completed BAC-111 F/O IOE & line check | 14:41 | SAT |
| | "Nice job" | | |
| 10/3/83 | BAC-111 F/O simulator proficiency check | 1:50 | SAT |

| | | | |
|-----------|--|-------|-----|
| | "Retrained to proficiency on ILS missed approach single engine" | | |
| 10/19/83 | BAC-111 F/O recurrent ground school | 16:00 | |
| 8/24/84 | BAC-111 F/O recurrent line check | 2:26 | SAT |
| 10/13/84 | BAC-111 F/O proficiency training | 4:00 | SAT |
| 11/15/84 | BAC-111 F/O recurrent ground school | 16:00 | |
| 3/14/85 | BAC-111 F/O on line check for captain | 2:24 | SAT |
| 10/11/85 | BAC-111 recurrent ground school | 16:00 | |
| 11/4/85 | BAC-111 F/O proficiency check | 2:00 | SAT |
| 2/26/86 | BAC-111 F/O on line check for captain | 2:24 | SAT |
| 3/26/86 | Completed Captain Development Class | 24:00 | |
| 10/2/86 | BAC-111 F/O proficiency check | 2:00 | SAT |
| 10/21/86 | BAC-111 recurrent ground school | 16:00 | |
| 12/5/86 | BAC-111 F/O on line check for captain | 2:10 | SAT |
| 9/4/87 | Completed B-737 F/O transition ground school | 70:00 | |
| 9/18/87 | Completed B-737 F/O simulator training ** | 24:00 | |
| 9/19/87 | B-737 F/O simulator proficiency check ** | 1:50 | SAT |
| | "Redo ILS to landing with engine inoperative" | | |
| 9/20/87 | B-737 F/O simulator LOFT ** | 4:00 | |
| | "I would place at the end of training Mr. Germano in lower 10%" ** | | |
| 10/2/87 | B-737-300 differences training | | |
| 10/3/87 | B-737 F/O IOE (jumpseat) | 8:03 | |
| 8/19/88* | Completed B-737 Capt upgrade ground school | 35:00 | |
| Undated* | Completed B-737 Capt simulator training | 12:00 | |
| 8/25/88* | B-737 Capt simulator proficiency check | 1:50 | SAT |
| 8/28/88* | B-737 Capt LOFT | 4:00 | |
| 9/19/88* | Completed B-737 Capt IOE | 29:21 | |
| | "Excellent landings... Needs to communicate more with cabin and cockpit crew... Brief takeoffs and landings" | | |
| 9/20/88 | B-737 Capt line check | 1:47 | SAT |
| 5/2/89* | B-737 Capt recurrent line check | 0:58 | SAT |
| 1/16/90* | B-737 Capt recurrent line check | 0:54 | SAT |
| 10/23/90* | B-737 Capt recurrent line check | 1:07 | SAT |
| 3/19/92* | Crew resource management training | | |
| 8/11/92* | B-737 Capt recurrent ground school | | |
| 9/14/93* | B-737 Capt recurrent ground school | | |
| 1/25/94 | Extended sick leave through 4/28/94 | | |
| 2/6/94* | B-737 Capt recurrent proficiency check | 2:00 | SAT |
| 4/29/94* | B-737 Capt requalification training | 2:15 | SAT |
| | "3 takeoffs/landings for currency return from sick leave" | | |
| 5/6/94* | B-737 Capt line check (requalification) | 1:06 | SAT |
| 7/19/94* | B-737 Capt recurrent LOFT | 4:00 | |
| 8/9/94* | B-737 Capt recurrent ground school | | |

* Period and event recorded only in computerized training records; information may be incomplete

** Instructor/check airman was Captain M. Rush

The First Officer

| <u>Date</u> | <u>Event/ "Comments"</u> | <u>Time</u> | <u>Result</u> |
|-------------|--|-------------|---------------|
| 2/2/87 | Date of hire, Piedmont Airlines | | |
| 2/7/87 | Completed basic indoctrination | 40:00 | |
| 2/22/87 | Completed F-28 F/O ground training | 80:00 | |
| 3/12/87 | Completed F-28 F/O simulator training | 30:00 | ** |
| 3/13/87 | F-28 F/O simulator check | 2:00 | SAT |
| 3/14/87 | F-28 F/O aircraft training/proficiency check | 1:00 | SAT |
| 3/17/88 | F-28 recurrent ground school | 16:00 | |
| 7/27/88 | Completed US Airways aircraft manual ground school | | |
| 10/25/88 | Completed US Airways basic indoctrination | | |
| 3/2/89 | F-28 recurrent ground school | | |
| 4/14/89 | Completed B-737 F/O initial ground training | 80:00 | |
| 5/1/89 | Completed B-737 F/O simulator training | 14:00 | *** |
| 5/8/89 | B-737 simulator LOFT/SP-177 autopilot tng | 4:00 | |
| 5/17/89 | Completed B-737 F/O transition IOE | 15:09 | |
| 5/17/89 | B-737 F/O line check | 1:54 | SAT |
| 7/10/89 | B-737-300 differences ground school | | |
| 7/11/89 | B-737-300 differences simulator training | 4:00 | |
| 3/17/92* | B-737 recurrent ground school | | |
| 4/24/93* | B-737 F/O proficiency check | 2:00 | SAT |
| 4/28/93* | B-737 recurrent ground school | | |
| 11/14/93* | CRM LOFT | 4:00 | |
| 3/22/94* | B-737 recurrent ground school | | |
| 5/12/94* | B-737 F/O proficiency training | 4:00 | |

* Period and event recorded only in computerized training records; information may be incomplete

** Required seven periods (one more than programmed)

*** 6 hours as flying pilot, 8 hours as observer

5. Interview summaries

Captain Thomas G. Johnson, Director of Flight Standards and Training, US Airways

Interviewed by B. Berman, M. Schack, J. Barnette, J. Brookman, and W. Roberson on 10/8/96

Johnson began his aviation career in 1969 as a commuter airline pilot in New England, and he joined Allegheny Airlines (a predecessor of US Airways) in 1978. He served as a line pilot, check airman, flight manager (Fokker F100), and Manager of Human Factors (including responsibility for CRM and AQP) before being appointed to his current position during 1994 (prior to the accident involving flight 427).

As Director of Flight Training and Standards, Johnson supervised 300 people, including 200 check airmen. The check airmen at US Airways were qualified to give all checks from all seats, including checks in both the simulator and the airplane.

The US Airways CRM program was based on the FAA Advisory Circular, and it included phases of indoctrination, recurrent training through simulator practice/feedback and ground school modules, and the integration of human factors into all cockpit activities of the line pilots through the development of checklists that promoted crewmember interaction.

Johnson stated that the company had always taught its pilots a transfer of control procedure, but this procedure was considered a technique and was not written. He characterized this procedure as "Someone has to fly; someone has to deal with it." Company manuals did not specify whether the flying pilot should continue to fly through an emergency (except for the RTO procedure, which specified that the captain would assume control to reject a takeoff).

Johnson stated that FAA guidance to its principal operations inspectors about training to proficiency during a proficiency check was ambiguous until 1988. The inspector's handbook used by the FAA through 1988 did not specify recordkeeping requirements for unsatisfactory performance or check airman comments. Johnson stated that the FAA's 8400.10 document, used since 1988, defined training to proficiency, and he said US Airways followed this guidance after it was published.

He stated that the predecessor to 8400.10 indicated that a 2 percent proficiency check failure rate was proper. In 1988, the US Airways failure rate was 1.6 percent, considering both Unsats and Redos. He agreed to provide the equivalent failure rate (Unsat plus Redo) for the period 10/1/93 through 10/31/94.

Johnson stated that the airline's flight managers, its senior instructors, and the FAA APM ensured check airmen were recording Redos by monitoring training and checking activities. He did not believe that a check airman would perceive an advantage in failing to record a redo in a pilot's records.

He stated that the company began to perform trend analysis on Unsats and Redos through the AQP. All AQP training events were graded Sat, Unsat, or Redo. Additionally, records were maintained about how unsatisfactory performance was improved to satisfactory. These statistics were maintained in the aggregate; US Airways did not track the performance of individual pilots. Although the airline did not track individual performance over time formally, it had taken action for continued poor performance by a pilot. US Airways had terminated pilots through a contractual process of retraining and rechecking.

Pilots who failed PCs were selected for closer monitoring by the flight manager, and these pilots were required to undergo more frequent line checks. Johnson said that this program was described in the company's Check Airman Manual #1. It was not

possible to be selected for closer monitoring under this program without receiving an unsatisfactory grade on one or more PCs.

Johnson said that neither Captain Germano nor First Officer Emmett would have been placed in this program, based on their records of performance prior to the accident.

Johnson said he did not believe that the same group of pilots was responsible for the failures on PC checks; rather, the failures were randomly distributed through the entire US Airways pilot group.

Regarding the comment by a check airman that Captain Germano was in the "lower 10 percent" of US Airways pilots, Johnson stated that he did not know the meaning of the comment. He said that some Flight Managers had encouraged check airmen to enter remarks in training records that were not specified in the 8400.10 document. He said that he did not know how an individual check airman could make that comment without checking all of the pilots employed by US Airways. Hypothetically, if he saw a comment such as this in a pilot's record, he would call the check airman and ask, "Was this pilot proficient; was there any doubt in your mind that he was proficient?" Johnson stated that he had never received a comment such as this one during his tenure as Director of Flight Training and Standards.

Regarding the situation of a pilot requiring three Redos in his past five PC checks, Johnson stated, "If the ride was really bad, the ride would have been failed...you have to be pretty sharp to get through the whole 2-hour period with only one repeat." He said if there was an underlying problem, "Eventually the person would get an Unsat."

Johnson said that US Airways policy of having a check airman evaluate a pilot "fresh" (that is, with no prior knowledge of the pilot's past performance record) provided an unbiased evaluation of the pilot based on whether the pilot met the standard.

Johnson described US Airways procedures for conducting a redo during a check ride (usually at the end of the period). He said that the check airman would announce, "Time out—we're in training now." They would practice the maneuver, perhaps including a short briefing. Then the instructor would announce, "Okay, training is over; let's check it again."

Johnson said that the tracking of "weak pilots" was done at US Airways only by tracking Unsat grades on PCs.

Ms. Kay Gilch, Manager, Pilot Records, US Airways

Interviewed by B. Berman, M. Schack, J. Barnette, J. Brookman, and W. Rober-
son on 9/18-19/96

At the time of the accident and to date, Gilch was responsible for the maintenance and quality control of pilot records. She stated that prior to 1987, US Airways maintained paper-based pilot training records; the documentation of each event was microfilmed three years following the event. However, pilot training records were maintained only in a computer database beginning in December 1987 (there was a parallel computer and paper system during the preceding year). For pilots originally employed at carriers that subsequently merged with US Airways, some records existed on microfilm for periods later than 1987. For example, for pilots coming from Piedmont Airlines, microfilm records for training events through 1990 were maintained in the current system.

In accordance with the air carrier's agreement with the FAA, US Airways purged all paper flightcrew training records thirty days after the training event, except that paper records of all "substandard or incomplete" training events were maintained indefinitely in an "Unsat" file. Events subject to this procedure included initial operating experience, line checks, simulator checks, recurrent LOFT, proficiency training, and initial training. Records of unsatisfactory training events were filed according to the equipment type, rather than according to the pilot's name.

There was a data entry form and corresponding printed report for each training event. Comment fields were provided on the forms for initial training events and recurrent simulator events (PC, PT, and Recurrent LOFT). Comments entered on these forms were entered as line items in the computer data base. No comment fields were provided on the forms for recurrent line checks, initial ground school sessions, or recurrent ground school sessions. However, if a recurrent line check were graded unsatisfactory, the paper form completed by the check airman would have been maintained in the "Unsat" file as a paper record, including any comments recorded thereon. Further, comments recorded during recurrent line checks that were graded satisfactory could be maintained in a "Comments" file (paper record). According to Ms. Gilch, it was the practice of US Airways to maintain only "derogatory" remarks in the "Comments" file.

If a pilot received additional training time from the same instructor, this time would have been recorded on the same data entry form as the original training. If the additional training were provided by a different instructor, it would be recorded on a separate form. The fact of additional training was not necessarily entered in a comment file; rather, it could be noted in the pilot's training file as additional session time.

If a pilot required a "redo" (a maneuver repeated during a check ride under the carrier's authorization to train to proficiency during the check), the redo would be listed in the comment field and entered into the data base.

Gilch explained that only the three most recent recurrent training events of each type were maintained in the airline's computer data base. However, data on earlier training events could be obtained from backup files. She reiterated that the Comment and Unsat files were maintained on microfilm, and there were no time limits for maintenance of these records. However, if a pilot required a redo on a PC or PT that was subsequently graded satisfactory, the record of the redo (and any other comments

made by the check airman) would be purged from the on line data base after the pilot received three subsequent checks of the same kind.

According to Gilch, US Airways never allowed a reduction in the 25 hours of initial operating experience for an upgrading captain. The company required upgrading captains to fly with two different US Airways check airmen, in addition to the leg required to be observed by an FAA inspector. As of August 1995, captain transition IOE became 25 hours, reducible to 20 hours. Corporate policy was to schedule for the full 25 hours and a minimum of 4 landings; reductions were acceptable only if a leg were canceled.

Gilch said that pilots received more than 25 hours of IOE "all the time." For example, initial IOEs for B-767s operated internationally usually lasted 45-50 hours; 30-35 hours were typical for B767 domestic schedules; and 26-30 hours were typical for other aircraft types. IOEs were scheduled for two-day trips, which accounted for the minimum of 25-30 hours. The airline did not split up the two-day trips for either the upgrading pilot or the check airman.

Gilch stated that at the time of the accident, it was the policy and normal practice of US Airways to reduce first officer IOE based on landings that the new first officer observed from the jumpseat. Landings performed by either the captain or first officer (in the right seat) could be used to reduce the IOE of the new first officer observing on the jumpseat. Gilch explained that US Airways had clarified its policy postaccident such that the airline would only reduce IOE based on the number of landings actually performed by a pilot.

Michael J. Rush, Captain, US Airways

Interviewed by B. Berman, M. Schack, J. Barnette, J. Brookman, and W. Roberson on 10/8/96

Captain Rush began his flying career in general aviation and joined Mohawk Airlines, a predecessor of US Airways, in 1966. In the 1980s he joined the training department, serving as a simulator instructor/check airman in 1984-85 and as a designated examiner (DE) on the B-737 in 1987. He returned to line flying in 1989 for what he described as "personal reasons."

He stated that he did not have a clear recollection of Captain Germano. He had never flown with Germano on the line. He could not estimate the number of check rides he had administered.

Regarding the "lower 10 percent" comment he had entered in Germano's training record, Rush stated that at that time the US Airways manual suggested commenting "Top 10 percent" if the pilot being checked had done a good job. He did not specifically remember the check ride after which he had written this comment for Germano, but he interpreted the comment to mean that Germano met all of the requirements but "his methods may not have been as fast or polished as other pilots."

He stated that he did not "recall my motivation at the time." He compared these ratings to those given to Olympic athletes; some successful athletes received lower marks. He said that Germano "was in that lower category of success." He suggested that he had probably written similar comments on other pilots' training forms.

He did not recall the redo that was required during Germano's check ride.

He could not recall whether there were discussions with his supervisor based on the comment he entered in Germano's record. As a check airman, he was supervised by Captain Al Sheldon. Later, he was supervised by Captains Rudy Mohalik and Paul Sturpe. He could not recall which of these men was the supervisor in 1987-88.

He could not recall whether Germano would have seen the training form with his comment on it.

Rush stated that he was observed by supervisors while acting as a check airman. He could not recall any comments from his supervisors based on these observed check rides.

He said that he recalled having trained Germano when he heard about the accident; however, he did not recall anything specific about the pilot or accident.

As an instructor/check airman, he performed about 2 - 2 ½ of the 7-lesson sequences per month. He also provided training in the aircraft, as well.

Rush stated that he could not remember whether he had considered grading Germano's performance as unsatisfactory. He added, "The record speaks for itself." He said that he would have had no doubts about grading Germano as Unsat had that been warranted. He said that, as both a check airman and designated examiner, he had graded some other pilots as Unsat.

The D.E. was an annual renewal and was not renewed when he returned to line flying. Rush said that he held the D.E. until he went back to the line "or nearly so."

Captain Paul Sturpe, Manager, Flight Operations, US Airways

Interviewed by B. Berman, M. Schack, J. Barnette, J. Brookman, and W. Roberson on 10/8/96

Captain Sturpe began his airline career in 1967 at Allegheny Airlines, a predecessor company to US Airways. In May 1988, he was named Flight Manager of the 737 program at US Airways. He subsequently served as manager of all US Airways Boeing aircraft fleets, then as the Boeing 737-300/400 flight manager. In July 1994 he was unassigned and worked on the investigations of US Airways accidents. Sturpe was assigned to his current position, Flight Operations Manager, in early 1995.

As the 737 Flight Manager, he was responsible for flightcrew training, supervision of check airmen, and the development of 737-specific operational procedures. He said that the 737 training program was established prior to his assignment to the 737 Flight Manager position, and he did not work on that program during his tenure.

Sturpe stated that when he took over the 737 program, Captain Rush had been on medical leave. The leave period was for as much as a year. He said that Rush did not return to the training department when he finished his medical leave but instead returned to flying the line. Rush's doctor had advised him to live in Los Angeles to be closer to his medical treatment.

Sturpe said that he would have been glad to have Rush back in the training department. He told Rush at the time that Rush could return to the training department "once a couple of issues were resolved." These issues pertained to Rush's conduct during a jumpseating incident, and were not related to Rush's performance in the training department.

Sturpe said that Rudy Mehalik had been Rush's previous supervisor.

As a Flight Manager, Sturpe did not take actions based on comments written by check airmen in a pilot's training records. He said, "If someone met the standards [that is, passed the check ride], they met the standards." However, if a pilot failed a PC or had an incomplete PT session, he always reviewed the pilot's history before determining the additional training time that would be required.

He said that he occasionally received personal or telephonic feedback from check airmen, reporting to him about pilots' progress or requirements for additional training sessions.

At one time, he said, US Airways had an informal program to document excellent performance in the comment section of the PC form. However, he believed that many positive comments by check airmen were not documented on the form.

Sturpe said that negative comments similar to the one made by Captain Rush about then-First Officer Germano were "not very valid comments." He said that a check airman could not state that a certain pilot is in the lower 10 percent of all US Airways pilots because a single check airman evaluates only a very small fraction of US Airways pilots. He said that he never encouraged check airmen to make these comments, nor did he do anything with them if he received them.

He said that some former flight managers had asked check airmen to rate pilots as being in the top 10 percent or bottom 10 percent. This request was never formalized or written down. He said that no one could agree on the best way to treat these comments.

Sturpe stated that if Captain Rush had wanted to return to the training department, Sturpe would have counseled Rush about his human relations skills. He said

that Rush was an excellent check airman with high standards, "but when somebody has a substandard event, how you tell the person about the substandard performance has a big effect on the person's subsequent performance." He said that Rush was not good at these human relations skills.

Sturpe said that he would never have been concerned about Rush passing a pilot who did not meet the standards. He said, "If Mike Rush said he was in the bottom 10 percent, he was still well above standards."

Sturpe stated that because Captain Germano's training record did not contain any negative comments or trends after the comment entered by Rush, Germano must not have been having a problem.

Ms. Patte Briggs, Manager-Passenger Services Systems-Domestic, US Airways

Interviewed by B. Berman, M. Schack, J. Barnette, J. Brookman, and W. Rober-son on 10/8/96

Briggs stated that she had two years of experience in her current position at US Airways.

Regarding passenger boarding control of infants, she stated that US Airways procedures specified that whoever issued a seat assignment or boarding pass to a passenger at the departure airport was to place a green sticker on the lifted document if the passenger was accompanied by a lap child. The green sticker would be attached at the ticket counter, gate check-in, or at the door to the jetway, depending on where the passenger received the boarding pass. The US Airways employee at the jetway door had the ultimate responsibility to identify lap children and verify or attach the green sticker on the accompany adult's boarding document.

Lap children's names were not included on the passenger manifest. Briggs said that there was an industry standard that an airline or travel agent booking a seat for a passenger with a lap child was to enter "with infant" in the adult's reservation record and enter a special service request with the infant's name in this record.

Briggs said, "This is a rather recent industry agreement" that began "about two years ago." She said that before this agreement, the US Airways procedure was to make a free-form notation in the adult's reservation record that there was an associated lap child.

She voiced concern about compliance by passengers because the passengers were not required to tell their travel agent or airline that they were traveling with an infant.

As of September 16, 1996, US Airways implemented a new procedure requiring that captains receive a verbal advisory of the number of infants aboard. This procedure was implemented at the request of the flight operations department. Also, station

agents were provided a worksheet on which they were required to enter the number of infants, and this worksheet began to be included in the ticket lift envelope for each flight. She said that this procedure had been developed by US Airways and was not an industry-wide standard. Another recently added procedure was for flight attendants to perform an onboard count of through passengers prior to boarding.

Briggs stated that US Airways did not perform a pre-departure count of onboard passengers, unless this count was requested by the captain.

She stated that at the time of the flight 427 accident, the captain would not have been notified by the gate about the number of lap children aboard. US Airways would not have had a record of the child's name. The gate would have noted if an infant was aboard and with which adult the infant was associated. The passenger manifest would not have included the number of infants, but the lift envelope would have contained a ticket coupon with a green sticker for each infant. Also, at that time flight attendants routinely performed a pre-departure count of passengers aboard, including lap children.

She stated that there had been no recent changes in the Federal aviation regulations regarding infant boarding control procedures.

6. FAA Information

On February 5, 1997, the Safety Board requested that the FAA provide all documentation or reports prepared by FAA personnel (at local, regional, or headquarters levels) from January 1, 1993 through February 5, 1997, that summarized, described, or evaluated (1) operational procedures at US Airways, or (2) compliance by US Airways with its own established procedures or with the FAA's operational regulations or guidelines.

The Board noted that the FAA should include any special emphasis inspection programs conducted by the FAA on US Airways operations or operational personnel; however, routine surveillance activities of the Pittsburgh Flight Standards District Office or geographic inspections only documented in Program Tracking and Reporting System (PTRS) entries need not have been included.

In response to this request, the FAA provided the Safety Board with the following information:

- (1) National Aviation Safety Inspection Program (NASIP) inspection Report, USAir, Inc., November 3, 1995.
- (2) NASIP inspection report, March 19, 1993.
- (3) PTRS records, January 1, 1992 through March 22, 1997.

- (4) FAA and US Airways correspondence related to the Altitude Awareness Program.


7. Audit of activities performed alone by Mr. Leonard

The information used by Mr. Leonard to compile a cross-airline comparison of pilot proficiency check failure rates was no longer available from the FAA for audit by the operations group. The operations group members were polled regarding whether they felt it was necessary to audit the remaining items that Mr. Leonard had performed alone, and they replied unanimously in the negative. Consequently, the audit of these activities was terminated.

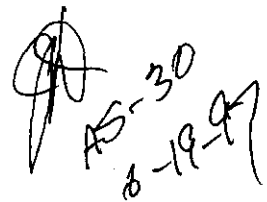
8. List of attachments

Appendix A: B-737-300/400 Transit Check (6 pages)*
 Appendix B: USAir Aircraft Fuel Distribution (1 page)*
 Appendix C: B-737-300/400 Auto Flight System Description (40 pages)*
 Appendix D: Captain Germano Training Record (4 pages)*
 Appendix E: First Officer Emmett Training Record (3 pages)*
 Appendix F: Flight 427 Departure Papers & Load Record (22 pages)*
 Appendix G: Organizational Charts & Job Descriptions (10 pages)*
 Appendix H: Check Pilot Standardization Meeting Minutes & Check Pilot Letters (10 pages)*
 Appendix I: USAir Check Pilot Handbook (12 pages)*
 Appendix J: PC & PT Guidelines & Common Errors (12 pages)*
 Appendix K: Excerpts FAA Inspector's Handbook 8400.10 (2 pages)*
 Appendix L: Crew Resource Management Information (51 pages)*
 Appendix M: LOFT Approval & Description (20 pages)*
 Appendix N: Flight Crew View, July/August 1994 (48 pages)*
 Appendix O: USAir Airwaves (1 page)*
 Appendix P: Excerpt from FAA NASIP (15 pages)*
 Appendix Q: Excerpts from DOD Capability Survey (11 pages)*
 Attachment R: Excerpts from USAir Check Airman Handbook, Vol. II, Boeing 737-300/400 (2 pages)
 Attachment S: USAir Boarding Procedures for Lap Children (1 page)
 Attachment T: Excerpts from Captain Germano Training Records (12 pages)
 Attachment U: Excerpts from First Officer Emmett Training Records (5 pages)
 Attachment V: Excerpts from USAir Pilot Records Computerized System Procedures Manual (34 pages)
 Attachment W: USAir Proficiency Check Unsat/Repeated Maneuver Data, 10/93-10/94 (1 page)
 Attachment X: Excerpts from USAir Safety On-Line Magazine, 12/94 and 1/95 (4 pages)
 Attachment Y: Excerpts from Post-Accident USAir Operations Publications (6 pages)

* These attachments were the appendices to the original operations group chairman's factual report. The appendices had not previously been issued by the Safety Board.

 6/19/97

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Air Carrier Operations

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6-19-97