ORIGINAL

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, DC 20594

DCA95MA054
OPERATIONAL FACTORS
GROUP CHAIRMAN'S FACTUAL REPORT

DAVID J. IVEY
AIR SAFETY INVESTIGATOR

OCTOBER 30, 1995

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Office of Aviation Safety
Washington, D. C. 20594

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OPERATIONAL FACTORS GROUP CHAIRMAN'S FACTUAL REPORT

DCA95MA054

A. ACCIDENT

Operator:	Atlantic Southeast Airlines, Inc.
Location:	Carrollton, GA
Date:	August 21, 1995
Time:	1253 Eastern Daylight Time (EDT)[1]
Aircraft:	Embraer EMB-120RT, N256AS, Serial Number 120-122

B. OPERATIONS GROUP

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[1]All times are Eastern Daylight Time (EDT) based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate, determined by Cockpit Voice Recorder (CVR) and Air Traffic Control (ATC) transcript.

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C. SUMMARY

On August 21, 1995, at about 1253 eastern daylight time, an Embraer EMB-120RT, N256AS, airplane operated by Atlantic Southeast Airlines (ASA) crashed after departing the Atlanta Hartsfield International Airport (ATL), Atlanta, Georgia. The flight was a scheduled passenger flight carrying 26 passengers and a crew of three operating under the provisions of Title 14 Code of Federal Regulations (CFR) Part 135. The flight was operating in accordance with instrument flight rules (IFR). While climbing through 18,000 feet, the flightcrew declared an emergency and initially attempted to return to Atlanta. The pilots advised they were unable to maintain altitude and were vectored toward the West Georgia Regional Airport, Carrollton, Georgia for an emergency landing. The airplane continued descent until ground impact. The airplane was destroyed by impact forces and postcrash fire. The captain and four passengers received fatal injuries.

D. DETAILS OF THE INVESTIGATION

The field investigation phase began on August 22, 1995. The operations group was comprised of both operational factors and human performance investigators and associated group members. The group participated in the on-scene investigation at Carrollton, GA, where the airplane wreckage was examined. Interviews were conducted with crash witnesses and rescue personnel. Company information and documentation relative to the accident flight were collected for the group.

On August 24, 1995, the operations group travelled to ASA headquarters in Atlanta, GA. Flight control, crew scheduling, and terminal operations were visited. Interviews were conducted with ASA management, flight control, crew scheduling and pilot personnel. An ASA EMB-120 airplane sister ship, N229AS, was visited on the ramp in ATL. Cockpit systems were reviewed and emergency exits were inspected and removed. Observation of the left engine from the captain and passenger windows was accomplished. The cowlings were opened on the engine during the observations. The airplane exterior was observed including rudder trim and aileron trim on the flight controls.

The ATL Flight Standards District Office (FSDO) of the Federal Aviation Administration (FAA) was visited where the principal operations inspector (POI) for

ASA was interviewed. The initial phase of the field investigation concluded August 26, 1995.

1. HISTORY OF FLIGHT

On August 21, 1995, airplane N256AS was scheduled to operate as ASE 211[2] from Macon, GA (MCN) to ATL at 1005. The airplane was scheduled to be released from maintenance at 0930 and be repositioned at the gate for passenger boarding. According to the ASA Flight Control Log, at 0930, maintenance advised that the flight would be delayed "at least 40 minutes." This was due to "engine rigging." The new maintenance release time for "in commission" was logged as 1030. At 1024, maintenance control was further advised that the new time was 1045.

The accident captain and first officer were the crew members assigned to N256AS and were scheduled to operate ASE 211 flight. According to company records, the captain and first officer checked in for sequence M9265 at 0920. The sequence was a two day trip departing MCN at 1005 and consisted of six flight segments the first day with an overnight stay in Albany, GA (ABY). The following day, four flight segments were to be flown and were scheduled to conclude in MCN at 1510. The flight was scheduled to depart with a full load of 30 passengers and a jumpseat rider. The jumpseat rider, an ASA captain, stated that he arrived about 0945 at MCN operations and was advised by the captain that the flight was delayed due to maintenance "rerigging" the airplane. He spoke casually with the captain for about 45 minutes and stated that the captain appeared well rested, relaxed and in a normal mood. He also went outside to smoke a cigarette with the first officer and he, too, seemed very relaxed. The first officer was reading a paperback book during the period of delay.

The jumpseat rider stated that when the airplane arrived at the gate, the first officer went outside to perform the preflight. He passed by the airplane while the first officer was preflighting the airplane, and upon entering the cockpit, the captain had finished the cockpit checks and was waiting for the paperwork.

According to the company flight log record, ASE 211 flight left the departure gate in Macon at 1100. The jumpseat rider stated that during the taxi and before takeoff, the captain accomplished all the first flight of the day checks, including both the manual and autofeather propeller feathering systems. The flight became airborne at 1115 and the crew reported a departure fuel to the company of 2,600 pounds. The jumpseat rider stated that the flight to ATL was uneventful.

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[2]ASA Flight 7211 used the call sign ASE 211 for Air Traffic Control (ATC) communications.

The aircraft and crew log recorded the landing time of ASE 211 as 1143 and arrival at the terminal as 1148. The fuel consumed during the flight was recorded in the logbook as 670 pounds. After arrival, the jumpseat rider departed and said he believed the captain stayed in the airplane to get the clearance for the next flight while the first officer went outside to smoke a cigarette.

The accident flight, ASE 529[3], received an ATC instrument flight rules (IFR) clearance from Atlanta to Gulfport, Mississippi (GPT), via the Atlanta 4 departure, then as filed. The routing filed in the center-stored flight plan for ASE 529 was WEONE intersection, direct to Montgomery VOR[4], Jet Route 37 to Semmes VOR, direct to Gulfport VOR, at Flight Level 240. The estimated time enroute was 1 hour and 26 minutes. The ASA EMB-120 Load Manifest that was prepared by the first officer for ASE 529 recorded 26 passengers, 3 crew, 724 pounds of cargo, and 2,700 pounds of departure fuel.

ASE 529 taxied from the ramp area in Atlanta at 1210, nine minutes after the scheduled departure time. The delay was attributed by the flightcrew to the late arrival from MCN. The flightcrew reported airborne to ASA's Atlanta operations facility at 1224. There were no further communications between the accident flight and the ASA operations or flight control facilities in Atlanta.

ASE 529 initially contacted the West Departure Sector of Atlanta Center about 1236 and reported climbing out of thirteen thousand feet for fourteen thousand feet. Several intermediate climb clearances were issued to the flight. About 1242, the controller issued a climb clearance to ASE 529 to climb and maintain flight level 240, which the flightcrew acknowledged. About 1244, the flightcrew declared an emergency and reported an engine failure. ATC cleared ASE 529 direct to the Atlanta airport. According to the ATC transcript, about 1246 the flightcrew stated "we're going to need to keep descending we need an airport quick...." The controller responded by providing heading information for West Georgia Regional Airport to the flightcrew. The controller reported the loss of ASE 529's transponder code on radar, and requested the altitude of flight, which the flightcrew reported as, "four point five." The flightcrew was instructed to contact Atlanta approach at about 1250.

The flightcrew contacted Atlanta approach and requested the localizer frequency for the West Georgia Regional Airport. After passing 1900 feet, the crew reported visual flight rules (VFR) and requested vectors to the West Georgia Regional Airport. The controller responded by issuing instructions to "fly heading 040...the

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[3]ASA Flight 7529 used the call sign ASE 529 for ATC communications.

[4]Very high frequency omnidirectional range.

airport at your about 10 o'clock six miles...." ASE 529 responded "040 ASE 529" about 1251.

This was the last transmission received by the approach controller from ASE 529 flight. The crash occurred about 1253.

2. FLIGHTCREW INFORMATION

The captain and first officer were certificated in accordance with existing Federal Aviation Regulations (FARs). No violations, incidents or accidents were recorded for either crew member in the records reviewed.

a. CAPTAIN EDWIN CRAIG GANNAWAY

Date of Birth: [redacted]/50

Pilot Certificate: Airline Transport Pilot, Certificate No. [redacted]
Ratings: Airplane Multiengine Land, EMB-120
Commercial privileges: Airplane Single Engine Land

Flight Instructor Certificate: Airplane, Instrument, Multiengine

Medical Certificate: First class, issued 04/03/95.

FAA records reported a second class medical; however, a letter provided by the aviation medical examiner indicated that class II was erroneously typed on the medical certificate.

Limitations: "Holder shall wear correcting glasses for distant vision while exercising the privileges of this certificate"

ASA date of employment: 03/07/88

Positions held during employment:
Second-in-command (SIC), EMB-120, 04/20/88 until 03/30/93.
Pilot-in-command (PIC), EMB-120, 03/30/93 until accident.

ASA TRAINING/QUALIFICATION RECORD

Date	Event (Hours)
03/07/88	Completed basic indoctrination/emergency training (40)
03/30/88	Completed initial/EMB-120 systems/CPT[5] (100)
04/08/88	Completed EMB-120 flight training (10.4)
04/12/88	EMB-120 SIC initial 135.293 check: Unsatisfactory (1.7) (Unsatisfactory performance on landings crosswind/with simulated powerplant failure/from circling approach)
04/20/88	EMB-120 SIC 135.293 recheck: Satisfactory
04/20/88	Assigned as EMB-120 SIC
05/11/88	Recurrent ground training
11/08/88	EMB-120 SIC 135.293 and .297 check: Satisfactory (2.3)
11/09/88	Recurrent ground training (8)
03/23/89	EMB-120 SIC 135.293 and .297 check: Satisfactory (2.3)
05/26/89	Recurrent ground training (11)
11/10/89	Recurrent ground training (5)
04/24/90	EMB-120 SIC 135.293 and .297 check: Satisfactory (1.8)
05/23/90	Recurrent ground training (5)
10/16/90	Recurrent ground training (5)
03/30/91	EMB-120 SIC 135.293 and .297 check: Satisfactory (2.0)
05/13/91	Recurrent ground training (5)
07/24/91	Emergency training/drills
10/18/91	Recurrent ground training (5)
03/05/92	EMB-120 SIC 135.293 and .297 check: Satisfactory (1.8)
04/20/92	Recurrent ground training (5)
090/9/92	EMB-120 SIC 135.293 and .297 check: Satisfactory (1.6)
10/21/92	Recurrent ground training (5)
02/23/93	Completed EMB-120 upgrade ground training (72)
02/24/93	EMB-120 Emergency Training(3)
02/27/93	Completed EMB-120 CPT
03/10/93	EMB-120 type rating check first segment (simulator portion), 135.293, and .297 check: Satisfactory (2.0)
03/22/93	Completed EMB-120 emergency training/drills (2)
03/22/93	Completed EMB-120 simulator and flight training (11.6)
03/23/93	EMB-120 type rating check second segment (aircraft portion): Satisfactory (1.2)
03/30/93	Completed EMB-120 initial operating experience (19.2)
03/30/93	EMB-120 135.299 check: Satisfactory (3.1)
03/30/93	Assigned as EMB-120 PIC

[5]Cockpit Procedures Trainer.

04/05/93	Recurrent ground training (5)
08/09/93	EMB-120 PIC 135.293 and .297 check: Satisfactory (2.0)
10/18/93	Recurrent ground training (5)
01/19/94	Completed quarterly recurrent home study module
02/02/94	EMB-120 PIC 121.440 check[6]: Satisfactory (2.4)
02/15/94	EMB-120 PIC 121.441 check: Satisfactory (2.2)
04/22/94	Completed quarterly recurrent home study module
07/18/94	Completed quarterly recurrent home study module
08/04/94	Recurrent LOFT[7] (4.0) (Included engine failure at V1,and propeller overspeed)
10/25/94	Completed quarterly recurrent home study module
02/06/95	EMB-120 PIC 121.441 check: Satisfactory (1.8) (Unsatisfactory performance on takeoff with powerplant failure, no flap landing, and NDB approach; retrained to proficiency during session.)
02/09/95	Special airports qualification
03/03/95	EMB-120 PIC 121.440 check: Satisfactory (1.6)
03/04/95	Emergency drills
08/07/95	LOFT in lieu of proficiency check, including wind shear, unusual attitudes, and propeller overspeed.

FLIGHT AND DUTY TIME

	Flight time	Duty time
Past 24 hours (Excludes accident flight)	6.36	10.97
Past 72 hours	12.74	30.49
Past 30 days (from July 23)	67.20	137.83
Past 60 days (from June 23)	145.63	275.20

[6]ASA was authorized to use FAA exemption 5450 because it was approved in the company operations specifications. The exemption permitted member airlines of the Regional Airline Association (RAA) to train, check and qualify their crewmembers under Part 121.681, 121.683 and all sections of Subpart N and O, and Appendices E, F, and H of Part 121 of the FAR. The exemption was granted to the RAA on June 18, 1993, and ASA was a member of the RAA.

[7]Line Oriented Flight Training.

Past 90 days (from May 24)	211.52	401.77
Total time	9,876.13	
Total time, EMB-120	7,374.68	
PIC total time, EMB-120	2,186.94	

72 HOUR HISTORY

Mrs. Gannaway stated that her husband, when off-duty, normally went to bed about 2300 and awoke between 0700 and 0730. He normally went running after he awoke. On Friday, August 18, he was in bed when she left for work at 0745. He ate lunch at the Rotary Club, and was working in the yard when she returned from work around 1715. Captain and Mrs. Gannaway had dinner together at the Touchdown Club and remained there to watch the football game until 2230 to 2245. They returned home, watched the news, and went to bed. On Saturday, August 19, Captain Gannaway left the house about 0600 to report to duty at Macon (MCN), about one hour away. He called Saturday night between 2230 to 2300 and said he had a hard day with bad weather.

On Sunday, August 20, Captain Gannaway returned home at 2100. He watched a National Geographic television program, said he was a little tired, and went to bed at 2300. He seemed fine. On Monday, August 21, he was awake at 0715. He had coffee during breakfast with his sons. He offered to take the boys to school (their first day back after the summer vacation) but, because he was due to leave at 0815 for work, did not.

b. FIRST OFFICER MATTHEW MARK WARMERDAM

Date of Birth: [redacted]67

Pilot Certificate: Commercial, Certificate No. [redacted]
Ratings: Airplane Single Engine Land, Airplane Multiengine Land, Instrument-Airplane

Flight Instructor Certificate: Airplane, Instrument, Multiengine

Ground Instructor Certificate: Advanced, Instrument

Medical Certificate: First class, issued 06/15/95, no limitations

ASA date of employment: 04/24/95

Position held during employment: SIC, EMB-120, 05/04/95 until accident

ASA TRAINING/QUALIFICATION RECORD

Date	Event (Hours)
02/16/95	Completed basic indoctrination (32)
04/04/95	Completed EMB-120 equipment ground/systems integration (72)
04/05/95	Completed EMB-120 CPT
04/20/95	EMB-120 SIC 121.441 first segment check (simulator): Satisfactory (1.8) (Unsatisfactory performance on V1 cut; was retrained to proficiency during session)
04/26/95	General Emergency/Emergency drills (8)
04/26/95	Completed simulator and aircraft training (15)
04/26/95	EMB-120 SIC 121.441 second segment check (aircraft): Satisfactory (1.5)
05/04/95	Completed initial operating experience (20.3)
05/04/95	Assigned as EMB-120 SIC

FLIGHT AND DUTY TIME

	Flight time	Duty time
Past 24 hours (Excludes accident flight)	6.36	10.97
Past 72 hours	12.74	30.49
Past 30 days (from July 23)	94.08	148.43
Past 60 days (from June 23)	196.39	335.77
Past 90 days (from May 24)	273.92	507.95
Total time	1,193	
Total time, EMB-120	363	

72 HOUR HISTORY

Because of the first officer's medical condition, a 72 hour history had not been obtained at this time.

3. AIRPLANE INFORMATION

N256AS, an Embraer 120RT[8] Brasilia, serial number 120122, was delivered to ASA on March 3, 1989. The airplane was certificated in the transport category and in accordance with FAR Part 25. The airplane was approved for day and night operations, VFR, IFR, and in icing conditions, and was configured to carry 30 passengers, two pilots, and one flight attendant. The airplane was equipped with a ground proximity warning system (GPWS), an autopilot, a cockpit voice recorder (CVR) and a flight data recorder (FDR).

a. WEIGHT AND BALANCE CALCULATIONS

The EMB-120RT Brasilia airplane flight manual was used by ASA. The manual was approved in accordance with FAR 21.29 for U. S. Registered aircraft, and was approved by the CTA[9] on behalf of the FAA.

The flight manual provided the following information:

Maximum ramp weight	25,529 pounds
Maximum takeoff weight	25,353 pounds
Maximum landing weight	24,802 pounds
Basic operating weight	16,699 pounds
Forward/aft center of gravity limits	21.0/42.0 %m.a.c.[10]

The ramp weight of N265AS at ATL was calculated by the flightcrew as 24,413 pounds. The load manifest retrieved from the accident airplane had recorded weight calculations based upon 2,700 pounds of fuel, 26 adult passengers and 724 pounds of cargo. A taxi fuel burn of 176 pounds reduced the weight for takeoff to 24,237 pounds. The planned fuel burn from ATL to GPT was 1,600 pounds. Based upon this calculation, the planned landing weight was 22,637 pounds.

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[8]"RT" is the abbreviation for regional transport.

[9]Centro Tecnico Aeroespacial.

[10]Percentage of mean aerodynamic chord.

A manual calculation of the weight and balance data for ASE 529 was performed by the operations group for the accident flight. The actual weights and limits were as follows:

Ramp weight	24,413 pounds
Takeoff weight	24,237 pounds
Takeoff %m.a.c.	28.65

The calculations were within weight and balance limits as prescribed in the Embraer EMB-120 Brasilia Weight and Balance Manual.

4. AIRPORT INFORMATION

Carrollton/West Georgia Regional Airport (CTJ) was located about 36 nautical miles west of Atlanta Hartsfield International Airport. The airport field elevation was 1160 feet mean sea level (msl) and had one runway oriented $340^0/160^0$. The runway was 5,001 feet in length and 100 feet in width, and was served by two instrument approaches: Localizer (LOC) RWY34 and non-directional beacon (NDB) or Global Positioning System (GPS) RWY 34. The approach control was handled by Atlanta Approach Control on frequency 121.0 megahertz (MHz). Weather was transmitted through an automatic weather observation system (AWOS-3) on frequency 118.175 MHz.

5. COMPANY HISTORY AND ORGANIZATION

a. GENERAL

Atlantic Southeast Airlines, Inc. (ASA) is a publicly-held company providing scheduled air transportation services as a 14 CFR Part 121 air carrier and a 14 CFR Part 135 commuter air carrier. The company was founded in 1979, and at the time of the accident, operated 83 turboprop airplanes (60 EMB-120s, 12 ATR-72s, and 11 EMB-110s). The company employed 650 pilots, 300 flight attendants and about 2,500 total employees. The 60-airplane fleet made ASA the largest operator of EMB-120s in the world. According to company reports, ASA was the largest regional carrier in the southeast United States and served 64 markets with over 4,100 flights per week from hubs located in Dallas/Ft. Worth, Texas, and Atlanta, Georgia.

The company had maintenance bases at Macon, Georgia and Texarkana, Arkansas. Flightcrew bases were located at Atlanta, Dallas/Ft. Worth, and Macon.

At the time of the accident, ASA maintained an association with Delta Air Lines as a "Delta Connection" carrier[11], coordinating joint flight schedules and fares under a shared computer reservations system code (DL). In 1986, Delta Air Lines invested $36 million in newly issued ASA stock, and had about a 20 percent financial interest in ASA. Two Delta Air Lines vice presidents served on the Board of Directors of ASA.

The ASA Chairman and Chief Executive Officer, George F. Pickett, and its President, John W. Beiser, were the two senior officers of the company. The Vice President of Flight Operations, Tilden M. Shanahan, reported to Mr. Beiser. Mr. Shanahan supervised 5 chief pilots (Training and Standards, ATL Part 135 operations, ATL Part 121 operations, DFW Part 135 operations, and DFW Part 121 operations). The crew scheduling and flight control (including Part 121 dispatch and Part 135 flight following) departments also reported to Mr. Shanahan.

b. TRAINING PROGRAMS

ASA's training program for flightcrews operating under Part 135 was conducted under Subparts N and O of Part 121, and in accordance with exemption 5450, granted by the FAA to the Regional Airline Association (RAA). ASA was authorized to use the exemption since approval was granted, by the FAA, through the company operations specifications. Prior to receipt of the exemption, training was conducted in accordance with Subparts E, G, and H of Part 135. The changeover occurred, according to company personnel, in January 1994.

ASA trained its EMB-120 flightcrews in accordance with Appendix H of Part 121, using flight simulators in initial, transition, upgrade, and recurrent training. The company alternately substituted proficiency training in lieu of proficiency checks. For the proficiency training session, ASA provided simulator-based, line oriented flight training (LOFT). According to company personnel, the training provided pre- and post-session briefings that incorporated the elements of crew resource management (CRM). The accident captain's training records indicated that he had participated in two sessions of recurrent LOFT.

ASA began a formal CRM training program, consisting of a two-day course and CRM elements embedded in LOFT, in January 1995. About 10-15 percent of flightcrews had attended the two-day CRM course at the time of the accident. No record was found of the accident captain or first officer having attended the two-day CRM course.

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[11]The three other "Delta Connection" carriers were Comair, Cincinnati, OH, Skywest Airlines, Saint George, UT, and Business Express, Portsmouth, NH.

ASA instructors provided transition, upgrade, and recurrent training to pilots already employed by ASA, and regularly "dry-leased"[12] flight simulators owned by FlightSafety International (FSI) and other providers.

At the time of the accident, the company hired first officers exclusively through FSI's regional airline new-hire program. Prospective pilots applied to FSI and paid a fee for a screening program. Those meeting basic standards were profiled and rated by FSI, and they joined a hiring pool from which several regional airlines obtained their new hires. When ASA required additional pilots, FSI was provided hiring requirements and a desired applicant profile. FSI forwarded the names and profiles of matching candidates to ASA. ASA then interviewed the candidates desired, and made offers of employment that were conditional upon successful completion of the FSI EMB-120 initial ground school and simulator training programs. The candidate paid for all the FSI training. ASA check airmen conducted the simulator check, and those who passed the simulator check, became ASA employees. The new hire pilots, then, received training in the airplane. The airplane-based portion of their training, initial check, and initial operating experience was provided by ASA instructors and ASA check airmen.

The vice president of flight operations expressed general satisfaction with the FSI program, and stated that ASA performed quality control over FSI by conducting their own checkrides of both the pilot candidates and the FSI instructors.

At the time of the accident, ASA completed training in airplanes at night. Training flights were conducted under Part 91. The training department's daily procedure was to send the flight control department a schedule of training flights. The flight control department usually did not communicate with a training flight unless the instructor made a special request. Flightcrews did not call in their out/off/on/in times to ASA operations or to the flight control facilities. The training captains filed their own flight plans, and although the flights did not always operate on a flight plan, the training captains worked with ATC for traffic advisories.

Whenever the ASA flight control department was unable to staff the regular overnight shift, the department closed for the night as soon as the last scheduled flight arrived. Some training flights operated through the night, while the flight control department was closed. Training captains were instructed to telephone a tape recorder in the flight training department when they completed their overnight flights. A training department staff person was responsible for listening to the tape recording at about 0800 the following morning.

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[12]"Dry lease" is a term that related to the rental of the simulator equipment. Only the simulator is rented and the instructors are provided by ASA whereas, a "wet lease" would provide both the simulator and the instructors.

c. SAFETY PROGRAMS

Pilots who had concerns about safety were expected to bring them to the attention of their chief pilot. According to the vice president of flight operations, if pilots had a "hard concern," they were to complete an Unusual Occurrence Report. The vice president of flight operations stated that he reviewed all Unusual Occurrence Reports. He cited an example of an Unusual Occurrence Report that resulted in a change to improve safety: a landing gear with an aberration or indication problem was recycled repeatedly by the flightcrew; the crew's report of the event resulted in a change to the training program that instructed crews not to cycle the landing gear more than twice. He was unable to recall any more examples of positive changes that resulted from Unusual Occurrence Reports.

In 1995, Delta Air Lines initiated a program of periodic safety appraisals of its "Delta Connection" partners. On February 14 - 15, 1995, a team of Delta operations and safety personnel conducted an appraisal of ASA. All four "Delta Connection" carriers were appraised within a two-month period, and the four carriers were given joint feedback so they could learn from the experiences of the other carriers.

The vice president of flight operations stated that ASA established the position of Manager of Safety about 1 month prior to the accident. The manager of safety reported directly to the president of the company, and the position had been established as an outgrowth of the operators safety summit held earlier in the year. According to the POI, the manager of safety was in training, and was scheduled to be in place by September 15, 1995.

d. CREW SCHEDULING

The manager of crew scheduling constructed the monthly flight schedules for the flightcrews. Additional responsibilities included making the bid packages, awarding the lines of flying and award mailings. Based on an interview with the Manager of Crew Scheduling, the typical overnight trip construction scheduled for Atlanta-based pilots flying the EMB-120 and ATR-72, was about 40 percent reduced rest periods (minimum of 8 or 9 hours); about 30 percent continuous duty overnights; and about 30 percent normal rest periods (minimum of 10 hours).

The vice president of flight operations stated that as a result of the 1991 ASA EMB-120 accident at Brunswick, Georgia, the company revised the flightcrew schedules to decrease the use of long duty days, continuous duty overnights, and overnights scheduled for reduced rest. He stated that the company got adverse reaction from flightcrews because the new schedules made the work day choppy and decreased the number of days off per month. Consequently, the schedules were changed back to about what they had been. At the time of the accident, the number of flight hours per duty period had been reduced to about 5 hours compared to about 5.5 hours, at the time of the Brunswick accident.

6. MEDICAL AND TOXICOLOGICAL FACTORS

The captain held a valid First Class Airman's Medical Certificate dated 4/3/95 with the restriction that "holder shall wear correcting glasses for distant vision while exercising the privileges of this airman certificate." His distant vision was listed as 20/30 in the right eye, 20/30 in the left eye, and 20/20 in both eyes, corrected to 20/15 in every case. His near vision was listed as 20/30 in each eye and 20/20 in both. According to his wife, the captain used glasses whenever he flew, and occasionally at night, for mild nearsightedness. The captain's overnight bag, found in the airplane wreckage, contained an empty eyeglasses case. According to the medical examiner, a piece of broken eyeglass lens was found in the captain's shirt pocket. The medical certificate listed his height as 6'0" and weight as 171 pounds.

The captain's wife characterized his health as excellent. He exercised regularly by running five to six miles, followed by swimming laps, and competed in marathons and triathalons competitions. Other pilots also noted that the captain competed in running races. According to his wife, he did not take prescription medicine, had not received hospitalization in recent years, and was never sick. He regularly took vitamins. He drank alcohol occasionally with friends when he was not scheduled to fly, did not smoke tobacco, and would have taken no drugs in the 72 hours before the accident that might have affected his performance.

Tissue and fluid samples were obtained posthumously from the captain for toxicological testing by the Toxicology and Accident Research Laboratory of the FAA Civil Aeromedical Institute. The urine sample tested negative for alcohol and other drugs of abuse.

The first officer held a valid First Class Airman's Medical Certificate dated 6/15/95 with no restrictions. His distant vision was listed as 20/15, and his near vision as 20/20 in both eyes. The medical certificate listed his height as 75 inches and weight as 208 pounds.

Blood and urine samples were obtained from the first officer when he was admitted for emergency treatment at the burn unit of the Erlanger Medical Center on the evening of the accident. The blood sample, obtained at 1602, tested negative for alcohol. The urine sample, obtained at 1551, tested negative on a screen of other drugs of abuse with the exception of positive results for morphine. According to hospital personnel, morphine was administered to the first officer for medical purposes prior to the time that the toxicological samples were taken.

7. FAA SURVEILLANCE

The FSDO - 11, located in College Park, GA, was responsible for ASA oversight and compliance with applicable regulatory requirements. FAA aviation safety inspectors for the ASA certificate consisted of a POI, a principal maintenance inspector (PMI), and a principal avionics inspector (PAI). All three positions were filled. According to the POI, he was

authorized an assistant POI, however, due to reduced personnel within the FSDO, that position was not filled. An aircrew program manager (APM) helped the POI, but was not an assistant POI. He was type rated in all three kinds of airplanes ASA operated. The POI stated that another APM position was also authorized, but not filled.

The POI described the relationship with ASA as very professional. They were not "easy" to deal with, however, if a federal requirement was necessary, ASA was ready to comply. The ASA vice president of flight operations described the current POI as "one of the best he ever had." He said that occasionally there had been interpretation problems, however, if the POI told them to do something, "it gets done." The POI had no other certificates to manage at the FSDO. He devoted 25 per cent of his time to the carrier line operations, 50 per cent to company manuals, regulations and procedures, and the remaining 25 per cent to FSDO activities and collateral duties. He stated that the APM spent about 75 per cent of his time on line operations.

A review of program tracking and reporting subsystems (PTRS) showed that 100 per cent of the National Program Guidelines (NPG) for fiscal years 1994 and 1995 were completed.

A National Aviation Safety Inspection Program (NASIP) was conducted at ASA during the period April 3 - April 14, 1995. There were 16 findings reported and all had been closed. According to the POI, only one finding required a letter of correction.

The Department of Defense (DOD) conducted a Capability Survey of ASA during the period October 31 - November 4, 1994. All operational areas surveyed, except one, received ratings of above average or average. The ASA safety program received an evaluation of below average. According to the DOD Survey;

> "Safety policies are informally managed through the vice president of flight operations.
>
> Overall impression of the safety program is that management recognizes their current level of auditing needs improvement and they are taking action."

All findings were debriefed with ASA and the FAA. The DOD recommended that ASA be found capable of providing passenger airlift services to the DOD.

A Georgia FSDO Emphasis Inspection was conducted at ASA during the period June 3 - June 18, 1993. The requirement for the inspection was established as a result of several enroute inspections and the office manager observing ASA crewmembers using non-standard procedures to document aircraft discrepancies. The inspection areas included aircraft maintenance records, enroute cockpit observations, and training programs. The POI stated that the inspection was patterned after the Regional Aviation Safety Inspection Program

(RASIP) in that two team members were invited and participated from outside the FSDO. He also stated there were no significant findings related to safety of flight.

According to the POI, there had been 55 certificate actions recorded in the FAA Integrated Safety Information Subsystem (ISIS), since the company began operations. All but one had been closed and most of those related to violations involving passenger safety on the ramp areas and security. The one remaining open action was held in Washington, DC by the FAA. It concerned pilot flight time while on standby, or reserve, and the 7 day rule.

He stated that the company had used the provision of self disclosure in the past. The disclosure related to four ASA pilots who checked in too early for a trip and didn't have sufficient rest prior to the check in. The POI estimated that about 50 per cent of the trips ASA flew were reduced rest and/or continuous duty overnights. He said that ASA's use of the reduced rest provisions"met the FARs."

The POI for ASA had previously been the POI for FSI and the training facilities in Georgia. Part of his responsibilities as that POI included the oversight of EMB-120 training, and he stated that he would not change a thing regarding that training. ASA operated under an exemption 5450 which allowed training and checking under Part 121 for Part 135 crewmembers; exemption 5450A was the yearly renewal of that exemption and three additional exemptions listed in the company operations specifications, allowed FSI to accomplish ASA's training.

Submitted,

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ATTACHMENTS

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